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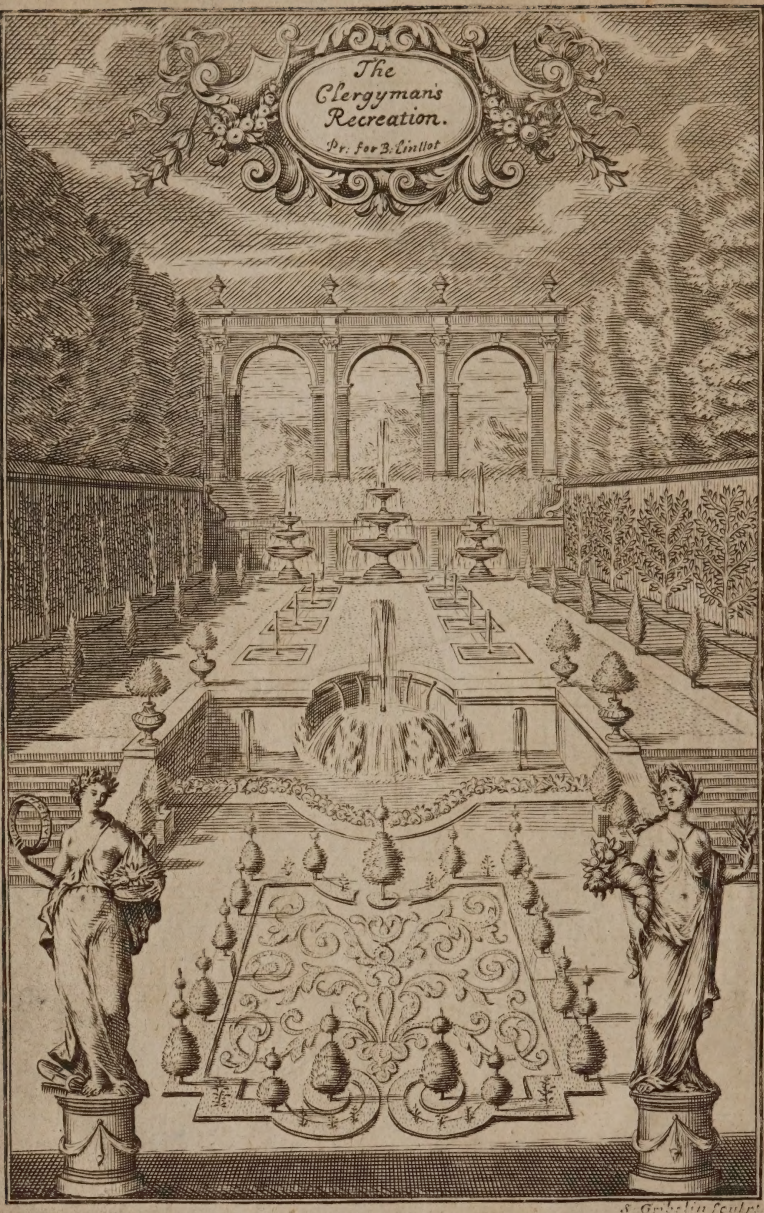
The
Clergyman's
Recreation.
Pr: for B. Lintot
S. Gribelin sculpt

THE
Clergy-Man's Recreation:
Shewing the
Pleasure *and* Profit
Of the ART of
GARDENING.

Quare agite ô proprios generatim discite Cultus,
Agricolæ, fructusque feros mollite colendo.
Virg. Georg.

By *JOHN LAWRENCE*, A. M.
Rector of *Yelvertoft* in *Northamptonshire*, and
sometime Fellow of *Clare-Hall* in *Cambridge*.

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19267

Mr. LINTOTT,

SO far as I am Judge, there is more of the Art of *Gardening* in this little Tract, than in all I have yet seen on this Subject.

March 15.
1713.

L. Loyd.

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PREFACE.

GARDENING *being of late Years become the general Delight and Entertainment of the Nobility and Gentry, as well as Clergy of this Nation: It is not with great Difficulty that I have comply'd with the Solicitations and Desires of many of my Friends, to communicate to the Publick some of that Skill which I have acquir'd therein, by the Observations and Experience of above Twenty Years.*

I am not so vain as to think I am able to teach the great Masters in this Science any new Discoveries concerning the Management of the Orangerie, or the Meloniere; or to invent any new and costly Ways for laying out Platforms, and enlarging Gardens: This perhaps has been already done to a Fault; and 'tis this Excess which has ruin'd brave Estates, and consequently has made others afraid of engaging in it. For I could never be of the Opinion of a certain Noble Person, who spake very contemptibly of his own Garden, to one that admir'd it; Alas! *(says he)* This is a small inconsiderable Place, of only Thirty Acres; whereas my Lord ——has above Fourscore.

If once we come to vye with one another, either for exquisite Niceness and Finery, or multitude of Acres, *one may easily guess what the consequence of that will be. Now therefore the Design of this is neither to teach the Management of Exotick Plants for Green-*

Houſes, nor to recommend any thing over-curious or coſtly; but only to lay down ſuch Rules as may make Returns both of Profit and Pleaſure: And to recommend the Art of Managing a Garden to thoſe of my own Order, the Clergy; not to make them envy'd by Magnificence, but to make them happy, by loving an innocent Diverſion, ſuitable to a grave and contemplative Genius. I would not be underſtood as if I thought a Divine might not innocently uſe many other Diverſions; only this I ſuppoſe moſt People will allow, that as there are ſome Sports and Exerciſes not ſuitable to a Divine, ſo Gardening *is a very agreeable and commendable Recreation,* viz. *Pruning, Planting, Sowing, Grafting and Inoculating, and ſometimes digging* ad Ruborem, *tho' not* ad Sudorem. *For indeed, of all others, a Clergy-man, whoſe chief and moſt conſtant Buſineſs is ſitting at his Study, moſt wants Relaxation, and ſome moderate Exerciſe, to preſerve Health. For my own part, I muſt own, that 'tis the beſt and almoſt only Phyſick I take: and if through the rigour or wetneſs of the Seaſon, I am denied the benefit of my Garden for ſome Days, and labour under Indiſpoſitions; God's Bleſſing, with a warm and Sunſhiny Day that invites me out, ſoon ſets me to rights again.*

This perhaps is not every ones Conſtitution; but thus far almoſt all are agreed, that the Diverſions and Amuſements of a Garden, with moderate Exerciſe, are not only moſt delightful to thoſe that love them, but moſt wholſom to thoſe that uſe them. And becauſe it muſt be ſuppoſed to be ignorance of the Times and Seaſons, and the not knowing what to do in a Garden, when there, as to Planting, Pruning, Grafting, &c. *which make ſo many regardleſs both of the Pleaſure and Profit of this Art; And becauſe I think alſo that*

many

many others have been horribly impoſed on, either by the Unskilfulneſs of the Country Gardeners, or, which is worſe, their Knavery, whereby they plant Trees of wrong ſorts on wrong Stocks, or not in a right Method and Seaſon, ſo as to be almoſt wholly diſcouraged by not receiving any Fruit of their Labour and Charge: For this reaſon I venture to communicate ſome Obſervations that I have made, which I conceive may be of uſe to my Brethren, or ſuch other Gentlemen as deſire to have a pleaſant and profitable Garden, and yet may want Skill enough themſelves to manage it with Succeſs.

I confeſs, I cannot but with grief look into ſome Gardens where I find little more than Leaves or half-dead Trees, whilſt yet the Owner, it may be, loves a Garden as well as my ſelf, and has impatiently expected the Fruits of it for many Years; and yet has only at laſt bought his Experience with the loſs of all that Time. This I ſpeak as to the choicer ſort of Fruit againſt Walls, where the Diſappointment has proceeded from wrong Poſitions: as for Inſtance, the Bure-Pear againſt a North or North-Eaſt Wall; or from wrong Stocks, as the Apricot on the ordinary Plum-Suckers; or the being cheated in the ſort of Fruit you ſend for, which is the moſt common Diſappointment of all. And truly this has made me look on with great Compaſſion, to ſee Gentlemen thus defeated of their Hopes, almoſt diſcouraged againſt any farther Attempts; becauſe they have already waited ſo long, even the beſt (as it is the earlieſt and moſt vigorous) part of their Lives without Succeſs. For a wrong ſort of Fruit or Fruit upon a wrong Stock, will, it may be, draw you on with Expectation for 4, 5 or 6 Years to taſte its Fruit, and then poſſibly you find with grief, inſtead of an old Newington *Peach, a dry inſipid Nectorine, or inſtead of a*

with French *Pear, a gritty Choak-Pear or Warden; or else your Tree being on a wrong Stock, will make a shift to live* 4 *or* 5 *Years, and then die at last. So that in both these Cases, your best and only Remedy is to take them up and plant others; and, it may be, not without the same Fear of being deceiv'd again. And yet if they prove what you expect, here must be* 3 *or* 4 *Years more before you receive Fruit: And I need not tell any one what a Disappointment it is to lose* 8 *or* 10 *Years of the best part of our Lives in tired and fruitless Expectations. If therefore I shall be able in any measure to remove these Fears from those who would otherwise love these innocent Diversions, and give them better hopes, I desire what follows may not be thought impertinent or unseasonable, though coming from a Clergy-man.*

I have often smil'd at the Rebukes I have met with from some Gardeners, who hate to be inform'd by a Scholar, or to be turn'd out of their beaten Road by any body; 'What, *say they, does this Man come and pre-* 'tend *to teach us, to make our Masters think we do* 'not *understand our Business? How should he know* 'what *Stocks are best for Trees, or how to prune* 'them? *It is fitter for him to be at his Studies,* 'a *making Sermons. So that I assure you, if the Gentleman has not a great deal of Courage, he must be content to go on in the old Way, or very much disoblige his Gardener.*

I am not in the least ashamed to say and own, That most of the time I can spare from the necessary Care and Business of a large Parish, and from my other Studies, is spent in my Garden, and making Observations towards the farther improvement thereof. For I thank God this sort of Diversion has tended very much to the ease and quiet of my own Mind; and the Retirement I find therein, by Walking and Meditation,

has

has help'd to set forward many useful Thoughts upon more divine Subjects, as I may perhaps hereafter have occasion to inform the World. In the mean time I cannot but incourage and invite my reverend Brethren to the love of a Garden; having my self all along reap'd so much Fruit from it, both in a figurative and literal Sense.

By the good Providence of God, and the extraordinary uncommon Bounty of a generous Patron, which I always remember with Gratitude, I have been placed where I now am near fourteen Years: And it may not be amiss to relate what Difficulties I have all along laboured under, that others may see what is to be done with Care, even to the worst of Soils.

Adjoining to my House, I found what they used to call a Garden, of about 32 Yards square, mounded round with low Mud-Walls, quite over-run with Couch or Twitch-grass, Nettles and Gooseberry-bushes; and, which was a great deal worse, upon a wet white Clay, lying within half a Foot of the Surface. The earnest desire I always had to have a Garden, made me look on with Grief; but yet I instantly resolved to be doing something, that no time might be lost towards getting Wall-Fruit, if possible.

I was dissuaded by most of my Neighbours, as thinking it a very vain Attempt, and that I should lose all my Labour and Charge, as others have done. Not yet discouraged, I resolved to pull down the Mud-wall that faced the South-east, and to build a Brick one in the stead about nine Foot high, which I did by the kind help of my Neighbours the same Summer I came, and sent for my Trees from London *in* October, *and planted the Walls with Apricots, best Pears, Vines, Figs, Plums, Cherries, a Peach and Nectorine. My next Care was to provide a Nursery of all sorts of Stocks for future Planting, as I made room for them.*

What

What Methods I uſed to give my ſelf any Hopes of Fruit in a Garden, which, with reſpect to the Soil, was made almoſt invitâ Minervâ, *will appear by the following Directions; but I only ſay here, to encourage my Friends, that in three Years time, if not ſooner, I began to taſte ſome of the Fruits of my Labours; the fourth Year I was rewarded with Fruit from almoſt all of them; and ever ſince I have had Plenty, even greater than I could reaſonably expect, from all the ſeveral ſorts except the* Old Newington, *which I moſt of all ſuſpected by reaſon of the Soil; tho' even that flouriſhed and bore, but the Fruit was watry and inſipid. I have ſucceeded better in other Sorts ſince.*

As to the Nurſery that I formed chiefly from all ſorts of Seeds and Stones, I have ſucceeded ſo well, that by Grafting and Inoculating thereon, I have for ſeveral Years had enough, not only for my own Uſe in all parts of my Orchard and Kitchen-Garden, but alſo to oblige my Friends, which is no ſmall part of my Pleaſure.

I give theſe ſhort Hints to ſhew how adviſeable it is when Perſons firſt come to a Living or an Eſtate, to begin their Plantations without Doors firſt, and not, as is uſual, fall to Repairs and Alterations within, to the neglect of the other. What we build or repair, generally ſpeaking, may be finiſh'd in a Summer, and we enjoy the Conveniencies thereof as ſoon as finiſh'd, and the Workmen have left you: But you muſt wait ſome Years to ſee the Fruits of your Plantation, and therefore the ſooner it is begun, the more reaſonably you may hope to live to enjoy the Benefit and Pleaſure of it.

But becauſe I repreſented it as a very difficult and hazardous Matter to procure right ſorts of Fruit, and upon good Stocks, it may be expected that I ſhould give ſome Direction and Advice what to do, ſince it is of ſo great Conſequence to be aſſured of a skilful as well

well as a faithful Nursery-Man. To this I only say, that in such a case as this, the best way is to trust to Men of known Honesty, Skill, and Integrity, such as the late Mr. London *and Mr.* Wise *have hitherto approved themselves to be; and their Names and Reputation are so well established amongst the Nobility and Gentry, that I hardly think the surviving Person, Mr.* Wise, *would willingly put a Cheat upon any one that would trust to him. However, I should not do justice to that honest Person I have so long dealt with, and so often recommended, if I should not take occasion here to say, that of above Five Hundred Fruit Trees bought of him, by my self and Friends, I do not remember I ever heard that one of them miscarried through his Fault, or proved otherwise than the Kind and Sort that was sent for; his Name is* Nicholas Parker, *Nursery-man at* Strand-in-the-Green *in* Chiswick-Parish, *near* London; *where I am well perswaded any Gentleman or other may be punctually and faithfully dealt with, though not known to him.*

If any one shall now say, upon sight of this little Treatise, That, as a Clergy-man, I might have employ'd my Time much better than to write about Gardening; I answer, That it easily appears a great deal of Time has not been spent in composing it; indeed only a few leisure Hours in the Winter, for want of Company, by way of Diversion, not at all interfering with, much less interrupting my proper Studies, or the necessary Attendance on the Duties of my Parish, which I think ought always to be uppermost, and to lie next the Heart of us the Ambassadors *of* Christ, *who have so great a Trust and solemn a Charge committed to us, as* The Teaching others the way of Salvation.

I hope therefore I need not ſay any thing further by way of Apology, except it be with reſpect to the Defects and Omiſſions of this ſmall Tract; and Theſe, *I hope, will be pardon'd by the great Maſters in this Science, as coming from a Clergy-man, who owns he has had greater things to mind. But if I have ſaid any thing here to perſwade thoſe of my own Order to love an agreeable Exerciſe and Recreation, and have taught them how to make* ſomething *of Intereſt and Pleaſure of thoſe little Parentheſes of their Lives, which moſt commonly go for* nothing; *I ſhall have gain'd my End, and the Satisfaction I aim at.*

THE *Clergy-Man's Recreation*; SHEWING THE Pleaſure *and* Profit OF THE ART *of* GARDENING.

CHAP. I.

Concerning Preparing the GROUND *for* PLANTING *and* SOWING.

THE Method that I ſhall obſerve in treating on this Subject, ſhall be the ſame that I would adviſe all Perſons to proceed in, who intend to form a Garden of their own, where it may be there

are

are little or no Preparations towards it. And I do not intend to direct you to any such costly Experiments and Rules as Monsieur *Quintinye* proposes to his Royal Master: But shall all along have regard not only to the cheapest, but also the most Expeditious Methods to procure you the Fruits of your Cost and Labour. Therefore for the sake of those who must either form a Garden out of their Home-sted, or (which is most common) do find a mounded Place for a Garden full of little else but noxious and spreading Weeds, I shall lay down the following Rules distinctly to each Case. To the first, who are to form a Garden anew, and intend to build Walls, I say that Thirty or Forty Yards square is abundantly enough for that you intend for your best Garden, where you would have your choicest Fruits and Flowers grow; for more would make you uneasie to have it kept and managed as it ought: If there be no great Inconvenience in it, it will be

better

better to have your Walls face not the four Cardinal Points, but rather between them, *viz.* South-East, South-West, North-East, and North-West; for then the two former will be good enough for the best Fruit; and the two latter good enough for Plums, Cherries, and Baking Pears. Only observe this, that instead of building your Wall that faces the North-East, it may be adviseable (to save Charges) to plant a Crab-Hedge of three Rows, which will be a good Mound, and will quickly grow up to be a better Fence than a Wall against the West and South West Winds, which make the greatest Destruction in a Garden; and according to the Observations I have made, do blow two parts in three of the whole Year. It may be adviseable also to plant here and there an Elm to be growing up to a greater height. For whatever you do, you must be sure to guard against the Westerly Winds, which blast your Fruit more than those from the East, as they are much more fre-

frequent. After your Platform is thus laid out, and you have disposed your Walks of Gravel and Grass, as your own Fancy leads you (for there is no Mode or Fashion in those things) you must then hasten to build your Walls, that your Fruit-Trees may be ready to plant in *October*, and in the mean time be digging your Ground to mellow all Summer and Winter.

There is some different Method to be used by those that find a Garden-place already mounded, full of noxious Weeds: For their first Care must be to destroy *them*; so that what is sown or planted afterwards may not perish by *their* spreading luxuriant Growth. Several Methods have been proposed towards destroying Weeds, such as sowing the Ground thick with Turnips, Hemp, *&c.* But I have found no way so certain and effectual as laying the whole Ground fallow all the Summer, by digging it over two or three several times, always observing to do it in the greatest Heats and Drought.

Drought. This not only certainly kills all the Weeds, but it likewise mellows and enriches the Ground exceedingly, as all Farmers know very well. Most are naturally desirous and greedy to make some Improvement of their Ground; but if they sow any thing with Expectation of Fruit, while 'tis full of Weeds, 'tis but loss of time, and they will repent it. I do not speak this with respect to your Plantation of Fruit-Trees, either Dwarfs or Wall-Trees. For I would have no time lost in the Planting of them, that you may the sooner taste their Fruit, neither will the Method propos'd in the least hinder this Design; for you may with little difficulty clear those particular places of all noxious Weeds (which yet must be done with care) where you intend to plant your Trees, and yet the rest of the Ground may lie fallow; which leads me to shew you under this Head, what is to be done before you plant your Trees: For except your Ground be extraordinary good indeed,

you muſt dig a Hole of four Foot ſquare, and two Foot deep, which muſt be filled up again with Dung and good Mould for each Tree you intend to plant. If your Ground be Marle or ſtiff Clay (which is my particular Misfortune) you muſt get all the Rubbiſh you can together, of Lime, Stone, ſmall pieces of Brick and Tyle, Coal aſhes, and Drift Sand to mix with your beſt Mould and Dung, ſo that the Clay may not convert it to its own Nature; fill up the Hole with this half a Foot higher than the reſt of the Level, remembring to preſerve ſome of the fineſt Mould near the Top (free from Dung) to plant your Tree in: But if your Soil be a not over-rich or hungry Gravel or Sand, you muſt fill up the Holes with the beſt rotten Horſe and Cow-Muck you can get, together with the Richeſt Mould. Thus when your Holes are cleared from Weeds, and prepared and filled up according to the foregoing Direction, put an upright Stick in the middle of the Hole for a Mark where

to

to plant the Tree in the Order you intend.

But becauſe it is a thing of ſuch great Conſequence to have your Trees well planted, in order to ſecure their future Growth and Proſperity, I cannot but add one farther Direction about this matter, which long Experience has confirm'd to me to be a good one, *viz.* this; That nothing is more agreeable or ſuitable to the Roots of a young Tree than untry'd Mould or Earth, ſuch I mean as has not within the compaſs of an Age been turn'd up either with Plough or Spade, which I ſuppoſe may eaſily be found in moſt Lordſhips: But I would recommend *that* particularly which is wont to be called a Waſte or Common, whereon Cattle have uſed to ſtand either for Shelter or Convenience. The Nature and Richneſs of this having never been exhauſted by the luxuriant Growth of Plants or Shrubs, or larger Weeds, there is a ſtrange and uncommon Fertility in it; more, I think, than is ordinarily to be met with

in any other rich Compositions of made Earths; at least 'tis such as I have found more suitable for the growth of young Trees; and therefore the more of this you put into the Places where you plant, the better; always observing to take off a thin upper Turf, and then dig only one Spade deep for this purpose; and if your Garden-Soil be Marl or Clay, remember (as I observ'd before) to mix Coal ashes or Drift-sand with it, otherwise all will quickly be converted to the native circumambient Soil, and thereby your Tree in ten or twelve Years time will languish, canker, and it may be, die.

I need not tell you here, that 'tis perfect murdering a young Tree to set it in the same Place and Soil where an old one had grown; and therefore more than ordinary care is to be taken to repleniſh the Place with this new untry'd Mould, as far as the old Roots went, or at least as far as new ones need to go.

It may not be amiss also to add under this Head, that if your good Soil be very shallow, or that your Garden lie over-wet and moist, it is a very good and safe way to lay Tiles or Bricks all over the bottom of your Trench, to hinder the Roots from striking downwards, and so occasion the spreading into the good Soil. For 'tis a Rule in Gardening, that the more horizontally either Roots or Branches of Fruit-Trees run, the better they answer the Purposes of bearing Fruit; as I shall have occasion to observe further under the Head of *Pruning*. I shall conclude this Head with advising those who are so unhappy as to lie upon a spewy, wet, or clay Soil, to make a pretty many convenient Drains, which may be done at a very easy Charge, by only digging Trenches two or three Foot deep, leading to the lower Ground, and then pouring in Pebbles or any rough or rubbish Stones: Upon which lay some small green Boughs, and throw the Earth a-

gain upon them. This I have experienced to last many Years, and will effectually drain your Garden.

CHAP. II.

Of the METHOD *of Planting* FRUIT-TREES *in your Gardens.*

WHEN you have disposed your Borders according to the foregoing Directions, great Care must be had in the right ordering and disposing also your young Trees; for if they be not planted according to Art, *viz.* not rightly order'd in their Roots, nor set at their right Height or due Distances, your Expectations may be in great measure defeated. If therefore your Trees come from the Nurseries about *London*, (as what seems to me most adviseable) the first thing you have to do is to prune their Roots, by taking off all the small Fibres intirely, and shortning the bigger Roots

Roots to about six Inches from the Stem; and if they have received any Gall or Wound in their Carriage, that part of the Root must also be cut off: Two or three Spurs are sufficient; but if there be more good ones, they may remain pruned, as aforesaid. The next thing to be done, by reason of their having been out of the Ground several Days, and so are become very dry, is to steep them in some Vessel of Milk and Water, or Dish-water, for 24 Hours, which will supple the Roots, and make them apter to strike new Fibres into the Earth when planted. The Head also must be pruned; but that may be done any time before it begins to shoot in the Spring. A single Branch is sufficient for a Head, and it is not well to leave above two, pruned to about six Inches above the Place of Grafting or Inoculation. If it be a Dwarf, place it as upright as you can; if for the Wall, set the Foot as far from the Foundation as conveniently may be, leaning with its Top to the Wall.

The foregoing Direction about pruning the Roots and Head ought to be particularly regarded, becauſe it is the common Fault of young and unskilful Planters to be covetous of leaving as much Head as may be; thinking *That* to be the earlieſt and moſt ready way to cover their Walls and to have Fruit; whereas if it does not endanger the Life of the Tree, it is a certain means to retard its Growth, and keep the Walls bare and uncover'd towards the Bottom. Indeed, Reaſon as well as Experience tells us, that there ſhould be a due proportion between the Roots and the Head; for Nature having receiv'd a great Check at the Removal of a Tree, its Roots being wounded, ſhortned, and expos'd to the Air, if the Tree ſhould not be eas'd of that tall Head it got in its Proſperity, (now larger than the injur'd Roots can ſupply with Sap) the neceſſary Conſequence would be, that if it ſhould juſt live, yet it muſt continue in a weak, languiſhing and unthriving Condition.

How-

However it may eaſily be perceived, by what has been ſaid, that there is a diſcretional Power to be us'd by a Planter with reſpect to thoſe Trees which are only removed from one part of the Garden to another, taken up with great Care, and moſt of the Mould about the Roots. Such I have my ſelf frequently removed without either pruning Root or Branch, and have ſucceeded very well: But then this is hardly to be practis'd on any but ſmall young Trees: And I ſometimes do this deſignedly, with only this View, to check the luxuriant Growth of a too vigorous Tree running altogether into Wood, taking it up carefully, and immediately ſetting it down again in the very ſame place, for a Reaſon you'll hear more of, when we come to Pruning.

The different Nature of Soils is to be regarded, as to the Height you are to plant a Tree above the Level of your Walks. In a warm, dry Soil, a little Elevation does; but in a wet Clay you cannot ordinarily plant too high, ſo

so that you do but in any sort cover the Roots with the best fine Mould, and preserve it moist for one Year against the scorching Heats of the Sun, by which means it will be preserved from Canker, and thrive much the faster, even tho' there should appear some part of the bigger Roots above the Surface; and still remember to allow for the subsiding of the new Earth, which will deceive you three or four Inches. Be careful to follow these Directions, observing to leave no Vacuities at the Roots, but press the fine Mould gently and closely with your Hand, and you need not fear hardly any sort of our Fruit-Trees growing and flourishing.

But it may not be amiss to say something concerning a safe Method to keep new-planted Trees moist and cool for the first Year, and, if need be, for the second. Mr. *London* and *Wise* recommend Fern and Straw laid five or six Inches thick, and two or three Foot every way from the Stem of the Tree, having

ving firſt laid half-rotten Dung all round the Tree. I very much approve of this, to keep them warm in Winter from the violent Froſts: But the Straw and Dung lying too long together engender Worms, Ants and other ſorts of Vermin, very injurious to Roots of Trees: Therefore the beſt Method I have found to keep the Roots cool and moiſt in Summer is to lay Sand in a convenient Circle round the Stem of the Tree, and then pitch or pave it with ſmall Pebbles, Flints, or any little ſmooth Stones, which will not only look beautiful to the Eye, but alſo effectually anſwer the end of keeping the Tree cool; and beſides, when you water it in the Summer, will help to let in the Water, and keep the Earth from being waſh'd away from the Roots.

It is alſo to be obſerved, that this Method of managing Trees in the planting them will be of the ſame uſe with reſpect to all Ever-greens, which are generally not over forward to thrive after a Removal. I ſay, you muſt *plant* them after

after the foregoing Rules, but not *prune* them, eſpecially Hollies and Yews, which have matted Roots, and will hold the Earth to them, ſufficient to convey them to ſmall Diſtances; and if a greater Diſtance is required, they ought to be ſent in Pots or Baskets, that neither Root nor Head may be touched with a Knife.

As to the Diſtance in which Fruit-Trees are to be planted againſt a Wall, *That* is in a great meaſure to be regulated by the height of the Wall. Four Yards Diſtance will do, if the Wall be ten or twelve Foot high, but if it be but ſeven or eight Foot high, five Yards diſtance is the leaſt that can be allowed: Only you are to obſerve, that a Pear, a Plum, an Apricot and a Cherry, require ſomething a greater Diſtance than a Peach or Nectorine; and therefore the lower Walls too are moſt ſuitable to the latter, if they have but a good Aſpect. I cannot but recommend that frugal Method practis'd by moſt Gard'ners near *London*, of Planting tall Fruit-Trees, Cherries, or

Plums

Plums in the intermediate ſpaces of the Wall, ſo that both top and bottom will be well-nigh furniſhed in two or three Years time. And then as the Dwarfs ſpread and increaſe, they take away the tall ones quite, making Standards of them in Orchards; except you had rather chuſe to plant Vines in thoſe intermediate ſpaces, which will quickly run up to the top, and bear the ſecond or third Year.

As to the beſt Seaſon for Planting, the general Rule to be given for *that*, is from the middle of *October* to the middle of *March*; only you muſt be ſure to avoid doing any thing of this nature in hard Froſts; and if your Trees in coming down happen to be overtaken by them, your only way is to carry them into Cellars, laying what Mould you can get over their Roots, and plenty of Straw over that, ſtaying till the Froſt be gone, that you may plant them ſafely. Tho' I have ſaid that any time betwixt *October* and *March* be the ſeaſon of Planting, yet I prefer Planting in Autumn rather

ther than Spring, for these two following Reasons.

(1.) Because a Tree planted in *October* or *November*, if the Ground be not over-moist and cold, will make some little Progress towards its future Growth during the Winter Half-year, its Roots swelling and disposing themselves to put forth those several small Fibres, which are to nourish and support the Tree, and so prepare it for the kinder Influences of the Sun in the Spring? when also the Earth will be better fixed and settled about the Roots, so as to keep out the parching Winds of *March* and *April*, often fatal to young Trees, as well as new-removed Plants and Flowers.

(2.) Because the Spring is a time when the chief of a Gardener's Work comes on, Digging, Sowing all manner of Seeds, Grafting, and some Pruning and Nailing, therefore it is not desirable to have also the business of Planting Trees to do then, when most of his other Business falls together upon his Hands.

Hands. We commonly say, what is done in a Hurry is seldom done well, and when Business is once put into good Order, 'tis nigh half done: It makes a great part of a Wise Man's Pleasure and Diversion, to have always something to do, but never too much. And methinks we should always chuse to have Amusements offer themselves to us, not in a Crowd, but in a regular and orderly Succession. Besides, some Intervals of Time betwixt one sort of Business in a Garden and another are very desirable to a good Man, who knows how to recapitulate all his Pleasures in a devout lifting up of his Hands, his Eyes, and his Heart to the great and bountiful Author of Nature, who gives Beauty, Relish, and Success to all our honest Labours. These grateful Thoughts, I own, these Contemplations in my own Garden, (with the Hopes of living in Paradise it self, where both Natural and Revealed Religion will be better understood than they are at present) give me a comfortable

fortable Taſte of the Divine Goodneſs and Bounty, which alone give the trueſt Reliſh to every Thing elſe.

But to return, and to conclude this Chapter: Your Trees being planted according to the foregoing Directions, and ſtanding with their tall Heads till the beginning of *March*, tack'd to the Wall to prevent their being ſhaken with Winds, you are then to ſhorten their Heads according to the Rule already laid down; but great care muſt be had that it be done with a ſharp Knife and a ſteady Hand, for fear of diſturbing the Root: Cut it ſlopewiſe, the ſlope facing the Wall.

CHAP. III.

Concerning the moſt agreeable Diſpoſition of a GARDEN.

AFTER an early and diligent care to furniſh our walls with Trees planted after the beſt Method, and in the propereſt Seaſon, we will commit them

to

to the prolifick Bleſſing of Heaven, that gives Life and fruitful Seaſons, and proceed to conſider what is to be done next, to make the other parts of the Garden agreeable as well as profitable. My purpoſe is not to give you all the varieties of Platforms, nor to lay out great Deſigns. Every one may eaſily pleaſe himſelf in a Form that ſtrikes moſt his own Fancy in ſo ſmall a piece of Ground as I ſuppoſe a Garden need contain: Only, it may be, I may happen to give ſome uſeful Hints to thoſe who are deſirous to hear what others can ſay to direct their own Fancies.

I would ſay then, that if I were to chuſe a Figure that could be as cheap and as eaſily had as another, it ſhould be a Square, or rather an Oblong-ſquare, leading from the middle of my Houſe, a Gravel-walk in the middle, with narrow Borders of Graſs on each ſide for Winter-uſe, and on each ſide of them Rows of all the Varieties of Winter greens ſet at due Diſtances, which will appear with an agreeable Beauty from the Houſe all the

Year. But then I say too, that I should be under no sort of Uneasiness to be confin'd to an irregular piece of Ground, which may be made to have its Beauties as well as the most regular. Strait Lines bring any thing into Order, and I see not but a Triangle in a Garden has its Beauty as well as a Square, and yet an irregular piece of Ground may be made to have Both by vertue of strait Lines, *viz.* Borders and Walks.

I confess indeed, an Irregularity is not so easily hid in a little Ground as it is in a Garden of larger extent, where long Walks and tall Hedges interrupt a distant and thorough View, and where, though the Walks and Hedges terminate in obtuse or acute Angles, no ways disagreeable to the Eye; yet you are insensibly led into new and unexpected Beauties still as you advance. Three or four Walks and double Rows of Hedges may be there contrived to open themselves at once to view, all terminating in the place where you stand; and the Triangular Spaces,

Spaces, by an ingenious Fancy, may be there agreeably disposed and filled up either with Borders of Flowers, or with Dwarff-Trees, or with Flowring Shrubs, or with Ever-greens? or lastly, with a little Wilderness of Trees rising one above another, till you come to the point of a tall one in the middle; this last may be made to look very beautiful with Charge and Care to clip them; for I am now got into a large Garden that requires a good Purse; and therefore before I part with it, I will only add, that methinks Gentlemen should not be oversolicitous at great Charges, so to level or square their Gardens, as to throw them open to one single view from the House; (which doubtless may be made a very beautiful one) because it may be worth while to consider, whether matters may not be so contrived, as to afford you many uncommon Prettinesses wholly owing to the Irregularity or Unevenness of the Ground; insomuch that every little advance you make, you shall be pre-

ſented with ſomething new to ſtrike the Fancy.

But altho' (as you ſee) Irregularities are beſt diſguiſed and ſet off in a large Plot of Ground; yet even in a leſſer Garden, and irregular Form, if it be not very aukward indeed, may be reduced to a Regularity ſufficiently agreeable as well as uſeful, as may be ſeen by the following plain Scheme.

But it is ſeldom one ſhall meet with ſo irregular a piece of Ground ready Walled out and deſigned for a Garden; and it can hardly be ſuppoſed any Lover of

of Order would chuſe to make it ſo, if he could eaſily help it.

As to the Walks, every one knows that both Graſs and Gravel are very agreeable when they are well kept; and therefore it is convenient to have a mixture of both; and I think ſeven Foot wide is ſufficient for either, in ſuch a Garden as I am ſuppoſing. Only it may not be amiſs to add, that it will be ſome advantage to your Fruit, if you contrive thoſe Walks that run parallel to your South-eaſt or South-weſt Walls to be Gravel, becauſe the Sun will certainly thereby reflex an additional Heat to them. I have ſaid nothing about the propereſt Materials for Walls, becauſe I ſuppoſe every one will chuſe to make uſe of ſuch as are neareſt at Hand, and what the Country affords. Brick is undoubtedly the handſomeſt and moſt commodious for Nailing; and conſidering what a great many Nails are uſed about Trees every Year, and that Lath-Nails will do for a Brick-wall, I believe 'twill ordinarily prove

cheaper than that of Stone, whose Joints are larger, and require much bigger Nails. However, there is another sort of Wall very common in *Northampton shire* and *Leicester-shire*, *viz.* that made of Earth and Straw well tempered together, known by the name of Mud-walls, which (tho' not so handsome) I venture to affirm (contrary to what most have said) to be better than either of the two former for accelerating the ripening of Fruit, as I my self have found by Experience. The Fruit indeed is sometimes apt to be soiled by great dashes of Rain: But there is not much in that, and the Objection is wholly taken away in such Fruit as requires paring, as Peaches and Pears, *&c.* If the Walls be made of very good Earth, and well temper'd, Nails will do, otherwise I use Pegs of Wood, such as are used for bad Walls, for fast'ning the Branches. The large Coping of Straw that is laid upon these sort of Walls is no small Advantage to the Fruit in sheltering them, and keeping off all perpendicular Rains.

Rains. But, as I obſerv'd, they are not very ſightly; and thoſe who will regard Beauty ſhould have Brick Walls.

It is not convenient to have the Borders under the Wall too wide; three Foot is ſufficient, that you may not at every turn be forc'd to ſtand upon them to nail or gather. There are great Varieties of Aromaticks and other Plants recommended to ſupport Borders, ſuch as *Thyme*, *Winter-Savory*, ſeveral ſorts of *Seduns*; but none I approve of ſo much as Dwarf-Box, in that it is ſo durable, and ſo eaſily kept with one clipping in a Year.

Great care muſt be taken that no ſort of tall Trees be ſuffer'd to grow in any of the oppoſite Borders or intermediate Spaces, ſo that the Shade of them reach to any of the South-Eaſt or South-Weſt Walls, whereby your Expectations of having good or early Fruit might be eaſily fruſtrated; thoſe Places ſo near your Walls would be better filled with round Dwarfs kept hollow in the middle;

or rather with flat ones, humouring the Borders with their Horizontal Branches; and what sorts are propereſt for theſe, I ſhall tell you in a Chapter by itſelf.

I never thought it any diſparagement to my beſt Garden, where I make my Soil commonly better than ordinary, to ſow in ſome of the intermediate Spaces ſome of thoſe Reptiles uſeful in the Kitchen, *viz.* Carrots, Onions, Parſnips, Spinage, *&c.* that it may anſwer its purpoſe, a profitable as well as pleaſant Garden; for theſe not growing tall, but kept clean from Weeds, are no unſeemly ſight at all, but rather make a pleaſing variety amongſt Trees and Flowers. Indeed, I commonly chuſe to baniſh out of this Garden all thoſe prouder taller things, Peas, Beans, Kidney-beans, and Cabbages, which are not ſo ſightly, and look more ruinous; and therefore aſſign them a place by themſelves at a diſtance.

It is needleſs to add any more Particulars under this Head; every one's own

Fancy

Fancy must supply what seems a Defect; for 'twould be endless to speak to all those Cases that an uneven irregular piece of Ground might seem to require.

CHAP. IV.

Of NURSERIES.

AFTER we have given our selves some respite from the great Business and Concern of Planting and disposing the Ground according to our own Fancy, (for that's the Beauty that pleases most) we must by no Means forget, as soon as possible, to begin to raise Nurseries of all sorts of Trees, which will be growing up to exercise our Art and Skill, and supply all our future Wants, which also will still answer our purpose of Pleasure and Profit. And I am not for throwing such Nurseries too far from our daily and constant Inspection, but am willing, if possible, to let the chief of them have a place in the best Garden,

lest

lest they be forgotten and neglected; for which purpose an irregular Figure in a Garden is peculiarly subservient, affording several little triangular Spaces proper to raise the several Nurseries we shall have occasion for.

Now there are at least two distinct Places to be allotted for the purpose of Nurseries, *viz.* one for tall Standards, Apples, Pears, Oaks, Elms, Ashes, Sycamores, and Limes, *&c.* which may be most proper to be at some distance from the House; and another for Dwarfs, such as you intend for Peaches, Apricots, Pears, Plums, and Cherries. And I would also have a third added for all sorts of Ever-greens by themselves. Now these two latter may be very properly made in some such by-places, as most Gardens will afford, and that with no interruption to the Beauty of it.

The Nursery you intend for the taller Standards should be made in a good rich light Soil, from the several sorts of Seeds peculiar to their kind, sown in *October* or *Novem-*

November. Crabs and wild Pear-Kernels are not to be preferr'd for Stocks to make Apples and Pears. Limes and Elms are to be raiſed from planted Suckers; and if you ſow Walnuts, 'tis adviſeable to ſow them with the Green Shell upon them, to preſerve them from Mice in the Winter. If this Nurſery be well managed, and kept clean from Weeds for two Years, the third Year the Crabs and Pears will be fit for Grafting and Inoculating, the Method of which I ſhall briefly ſhew you in a Chapter by it ſelf.

It will be convenient to have the Nurſery for Dwarfs by it ſelf, that they may not be overtopt by taller Trees. And you are to obſerve that the Stones of Peaches and Apricots are by no means proper to raiſe thoſe ſorts of Trees good or laſting: But for this purpoſe you muſt get together a good Quantity of Stones taken either from the Pear-plum, Muſcle, or *Bonum magnum* Plum, which have been found by long Experience to be better and more laſting than any other.

The

The not being careful about this matter has been the Occasion of great Disappointments; the Trees often dying after two or three Years, tho' the Stocks have been alive. Black Cherries also are the only Stocks whereon to raise all the several sorts of Cherries; but the best Plum will do on any ordinary Plum or Sucker: Tho' 'tis not so advisable to use Suckers, even from the best sorts, because they will be constantly apt to put forth such Plenty of Suckers themselves, and so the Vigour of the Tree may be too much exhausted that way.

The third Nursery also that I mentioned, of all sorts of Ever-Greens, is a very pleasant and profitable one, and deserves a place in our Garden; but it requires something a different Management from the two former. For which Purpose you must provide your self with a sufficient quantity of the Seeds, or Berries of Holly, Yew, and Juniper, which you may put into distinct but ordinary Pots or Boxes, putting also some fine

Mould

Mould over them in the Pot, and ſo bury them for one Year. For if you ſhould ſow them (as other Seeds) immediately, they would not come up the firſt Year: by which means you would loſe the Ground that Year, and have beſides the trouble and charge of keeping it clear from Weeds: Whereas by thus laying them in heaps for one Year in any by-place, you will have them all ready by the following Spring to ſow out in order, and they will come up as other Seeds; only you muſt be very careful to keep theſe Beds clean from Weeds, which do ſo eaſily choke all Plants of ſo ſlow a Growth. A ſlow Growth indeed they have for the firſt two Years; but after that, they will recompence all your Labour and Care, by their Beauty, Uſefulneſs, and vigorous Growth: Whereas ſhould you content your ſelf to get theſe ſorts of Plants out of the Woods or Hedges, they will mightily deceive you. The greateſt part of them will die; and the reſt will only toll you on with Expecta-

pectations of their Growth, and yet will rarely prove vigorous and thriving Plants.

This last Nursery will be of great Use to give new Beauties to your Gardens as Occasion serves, or as your Fancy shall lead you to adorn it with several sorts of Ever-green Hedges: Among which, none in my mind is to be compar'd to the Yew, which is (as I say) so tonsile, and grows so very thick and beautiful with clipping, and withal bids defiance to the hardest Winters, that it is the best and most lasting Ornament in a Garden. To make one in love with these Hedges, you need only take a walk either in Paradise or the Physick-Gardens at *Oxford*, where you are presented with all that Art and Nature can do to make these things most agreeable to the Eye. Indeed, the Yew is a Plant that loves Uniformity, and is naturally apt to grow regular, and withal so intire that it is no very difficult matter to dispose it either for Hedges or Pyramids.

Your

Your Hollies will be beſt employed for Stocks to raiſe the ſeveral variegated ſorts by Grafting and Inoculation, which, tho' now common, are no inconſiderable Ornament to a Garden, making their beſt Shew, when all other things have loſt their Glory; eſpecially when they happen to be full of Red Berries, which make a moſt pleaſing mixture with white, or yellow, and green Leaves.

I ought to tell you in this place, that Firrs and Pines are to be raiſed from thoſe little Seeds taken out of their large Apples, and they will come up the firſt Year, and will quickly make beautiful Trees, eſpecially in a cold Clay. *Phillerea's* and *Pericanthia's* will do beſt from Layers. And as for Vines and Figs, the Culture and Encreaſe of them is ſo eaſily had from Layers and Suckers, that you need not give your ſelf any farther trouble about them.

CHAP.

CHAP. V.

Of PRUNING.

IT is of all others the most important Concern of a Lover of a Garden, to know how to prune his Fruit-Trees seasonably, and according to Art; that when he comes to examine them at the time of Fruit, he may find something more than Leaves or Wood. And yet I can by no means think it so difficult a matter to do, as Monsieur *Quintinye* would make one believe, by his tedious and enigmatical way of Writing on this Subject, which (as far as I can see) has rather perplex'd than inform'd his Reader. I have had twenty Years Experience in this Matter; and if I can but speak intelligibly, (as I hope I may) I question not but to make others perform and practise as successfully as I have done my self. So great a desire have I that the Love of Gardening may prevail, that it be not tired with great Charge and little

little Profit, but be rewarded with good as well as much Fruit! Now in the Business of Pruning, it is a hard matter to speak to all Cases in exact Method, or in the Order of Time; I shall therefore first lay down some general Rules as the fix'd Laws whereby every one should govern himself in the Management of his Fruit-Trees, either Dwarfs, or those against the Wall, and then proceed to some other particular Directions that ought to be well regarded for each particular sort, tho' they have not ordinarily been taken notice of. To which purpose it is to be observ'd;

(1.) That the more the Branches of any Tree are carried Horizontally, the more apt and the better disposed that Tree is to bear Fruit; and consequently the more upright and perpendicular the Branches are led, the more disposed that Tree is to encrease in Wood, and less in Fruit.

This is what I have long experienc'd to be true; and (as I conceive) the rea-

son of it seems to be, That by bending down the Branches of a Tree from a Perpendicular to an Horizontal posture, you thereby check the Sap, or free Circulation of it; (for that it doth circulate, I shall shew you in another place) which Circulation when Nature performs most freely, tends to growth and encrease in Wood; but when it any way suffers a check either by Art or by Accident in the Body or Root, less vigorous and luxuriant Shoots are form'd, and consequently more bearing Buds.

(2.) As a Consequence of the foregoing Proposition, you are ever to take care to keep the middle of a Tree free from great Wood, or thick Branches; but as these encrease and grow upon you, cut them out intirely; there is no fear but the place will be filled up again quickly with better and more fruitful Wood. In Dwarfs you are to keep all open, intirely free from Wood, leaving only Horizontal Branches: And in your Wall-Trees, if you do but take care to fur-

furniſh your Wall with Horizontal Branches, Nature will make an abundant proviſion for the middle; and therefore you muſt chuſe diſcreetly ſuch as are not over-vigorous Shoots, to furniſh you with bearing Branches; a defect of which, or the want of plenty of Bloſſoms in any Fruit-Tree, is (generally ſpeaking) a Reproach to the Skill of the Gardener. For tho' he cannot command Fruit from Bloſſoms, on the account of bad and unkind Seaſons, and ſo cannot have it *when* he pleaſes, yet he may in a manner have it *where* he pleaſeth, and keep almoſt all parts of the Tree in a bearing ſtate.

(3.) Another general Rule to be obſerved is, to take care your Tree be not over-full or crouded with Wood, no, not even with bearing Branches, as is too frequently ſeen in the management of Peaches, Nectorines, and Cherries. Nature cannot ſupply a ſufficient quantity of ſuitable Juices for them; and then the conſequence will be, that none of them

will be well supply'd, but the Blossoms will either drop off, or the Fruit will dwindle to nothing. However, this is certain, that a convenient space between one Branch and another is most proper; a multitude and confusion of Branches crouding one upon another, producing neither so much nor so good Fruit. So, crossing one Branch over another is reckon'd very unseemly, and is indeed contrary to the Rules of Art. But yet this is not to be thought so frightful a Sight, that we must constantly avoid it, even to the suffering void Spaces and Barrenness in the Wall, which is a greater evil. A slender-bearing Branch may often well enough steal behind the main Body of the Tree, or some of its larger Branches, and not offend the Eye at all; but may gratifie the Taste at the End of the Year. But still this Practice must not be made too bold with, for fear of Confusion.

Lastly, I shall only add for a general Rule, that all strong and vigorous Branches are to be left longer than weak

and

and feeble ones on the ſame Tree, conſequently the Branches of a ſickly Tree are to be pruned ſhorter, and fewer in number, than thoſe on a ſtrong healthful Tree. Methinks I need not add that all Branches ſhooting directly forward from Trees growing againſt a Wall, are to be cut off cloſe to the Branch from whence they come; as alſo all Branches proceeding from the Knob, whereon the Stalk of a Pear grew, are to be intirely taken off; but not the Knob itſelf. After having given theſe general Directions, I am perſwaded an ingenious Lover of a Garden, by the help of ſome Obſervations that he muſt have made of his own, might manage the Buſineſs of Pruning with tolerable good ſucceſs: But becauſe there are ſome Peculiarities belonging to the Management of almoſt every kind of Fruit-Tree, (ſuch, I now mean, as grow againſt a Wall) I ſhall ſpeak diſtinctly and particularly to each of them, what I have found by Experience to be a good and ſafe Method of Pruning.

The VINE.

I shall begin with the Vine, which of all others needs Pruning most; and tho' it is the easiest performed, yet (as far as my Observation has gone) it is least understood. Our Climate is not so favourable, or the Sun over-bountiful of his Ripening Heats, but there is need of all the Care and the greatest Art to cultivate and help Nature forward in bringing Grapes to any degree of Perfection in *England*. However, this is to be done most Years with some Diligence and Skill. We will then begin with the Vine, in the condition it is commonly left in *November*; which, if the Tree has any thing of Youth and Vigour, is confused and ruinous enough, tho' it has been carefully managed the preceding Summer, the Vine putting out the most and the longest Shoots of any other Tree. After therefore you have taken special notice of the First and Third general Directions already laid down, you must observe this

this alſo peculiar to the Vine, That the leſſer and weaker Shoots never bear any Fruit, and therefore muſt intirely be cut off, inaſmuch as they would only tend to weaken the Tree, in drawing away that Sap that ſhould go to nouriſh the Fruit-branches, which are thoſe of the moſt vigorous ſort; and therefore muſt carefully be preſerved, leaving only 4 or 5 Buds or Eyes of the laſt Year's Shoot; for if you ſhould leave more, they would only exhauſt the Sap in vain, the firſt and ſecond Eyes only bearing Fruit, and ſometimes the third, from the extreme part of the Branch. Indeed, when a Vine has put forth a more than ordinary vigorous Shoot, and you can carry it Horizontally into a void place, it will ſometimes bear in 5 or 6 of the extreme Eyes, and ſo may be left longer; but this is not ordinarily to be practis'd. A Vine muſt lie thinner of Wood than any other Tree, therefore you muſt carefully view what old Wood may be intirely ſpared, and how you can conveni-

ently fill that Space with Neighbouring vigorous Shoots, ſtill obſerving every Year to preſerve the new Wood, and to cut out the old. This firſt Pruning of the Vine may be done at any time before *February*; but later than that is not adviſeable, leſt it bleed in the Spring, which it will be very apt to do at thoſe places where you have cut off any thick Branches.

There is alſo a ſecond and third Pruning to be performed on a Vine: The ſecond is to be done about the middle of *May*, when the Bunches of Grapes are perfectly formed, and the Branch has ſhot 2 or 3 Foot long; then pinch off the Branch about ſix Inches above the Fruit, and nail or any way faſten it cloſe to the Wall, ſo that the Fruit may touch, if poſſible. The fruitleſs Branches may be let alone to the third Pruning at *Midſummer*, when all muſt be re-examin'd; for then you are to unburthen the Vine of that multitude of luxuriant Branches it is apt to put forth, and to ſhorten them to a convenient length, to let in the Rays of the

the Sun towards Ripening the Fruit: Tho' you are to take notice, that it is not convenient to have the Fruit too much expoſed, for fear of cold Nights and Rains.

A vigorous Vine will ſtill require a fourth Pruning about *Auguſt*, when it will have ſhot out long Shoots from the extremity of the laſt Pruning; which therefore muſt be ſhortned again, and ſome of the Leaves diſcreetly pluck'd away from before the Fruit.

There is a more than ordinary Neceſſity for carefully minding and managing the Vine, becauſe all we can do is little enough to get ripe Fruit, eſpecially ſome Years, and on a bad Soil: But even with both thoſe Diſadvantages, with a little Diligence and timely Care, there has ſeldom been a Year but I have had good Grapes, and moſt Years great Plenty. I have try'd ſome Experiments for accelerating the Ripening of Grapes, as putting the Fruit in *June* into an empty Flask, and running the Branches upon the Tiles of the Houſe, or on a Slope-

wall,

wall, but neither answer'd my Expectation. The Grapes indeed ripen'd in the Flask rather sooner, but then they were apt to be mouldy, for want of free Air, and had an insipid Taste; and the Slopes, tho' they admitted more of the Sun's Rays, yet they subjected the Fruit more to the Rains, Dews, and cold Nights, which (as far as I could see) overpower'd the greater Blessing of the Sun. To so little Purpose is it for Men of Theory * to philosophize about these Matters, without having had some Experience and Knowledge in the Practice.

The PEACH *and* NECTORINE.

Both these require the same Culture and Management, and therefore I put them together; and if the general Rules already laid down be but carefully observed, there will not need much to be said towards the Government and successful Pruning of these, which are so apt to

* *As an Ingenious Author has done, who has wrote a Book in* Quarto *to shew in a Mathematical Way the great Advantage of Slope-Walls.*

put

put forth plenty of bearing Branches after the ſecond or third Year of Planting, that you may eaſily make choice of thoſe that are good and healthful. If theſe Trees make too much haſte to bear, *that* is a bad ſign of Weakneſs, and they muſt be managed accordingly, by plucking off all or moſt of the Bloſſoms or Fruit, and pruning ſhort. This is a very eaſie Management; all the Difficulty is, when a Peach is over-vigorous, for then Nature is apt to make great Confuſion, and it requires ſome Skill to know what to refuſe. You muſt therefore be ſure what to chuſe, and to cut out what great Wood can conveniently be ſpared, and what remains muſt be left the longer, ten or twelve Inches of the laſt Year's Shoot, not forgetting that in two or three Years it muſt be cut intirely out, when you can otherwiſe furniſh your Wall with ſmaller Wood. Fruit-bearing Branches, which are very eaſie to be known by their full and ſwelling Buds, are not generally to be ſuffered above five or ſix Inches. Theſe

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(as I obſerved) are always of the weaker ſort, and of the preceding Year's Shoot. You muſt take care to cut out all dead Wood, and yellow ſapleſs Shoots; which that you may be ſure to do, it is good for this and other Reaſons to ſtay till the hard Froſts are over before you prune a Peach, which muſt be done with a ſharp Knife too, otherwiſe Strings of the Bark will be left behind; a Pen-knife indeed is moſt proper for the ſmall-bearing Branches. All *Autumn* Shoots muſt be rejected as uſeleſs and unprofitable. When you have thus trim'd and form'd your Tree into Beauty and Order, you have little elſe to do at it (except the thinning your young Fruit where more than two grow of a heap together) till *Midſummer*, when you muſt ſhorten the Shoots diſcreetly, and faſten them to the Wall, no matter in what Order, becauſe that muſt be alter'd the next Pruning, only you muſt take care to let the Fruit ſee the Sun as ſoon as 'tis partly come to

its

its bigneſs, which will give it its proper beautiful Colour, and Maturity alſo.

After what has been here ſaid, I cannot think it neceſſary to add any thing particularly with reſpect to the Apricot, that requiring the ſame Management as the Peach, except that there is no Danger of its bearing too ſoon, and that it is ſomething more apt to run into Wood, which therefore muſt be particularly conſider'd, and guarded againſt.

The PEAR.

There is no Tree requires the exact and careful Obſervation of thoſe general Rules laid down, ſo much as the Pear, which in free and rich Soils is apt to be unruly and ungovernable, running altogether into Wood and luxuriant Branches. It is commonly too proud for a Wall; but yet for the ſake of that noble Fruit which ſome Kinds produce by the Help of a Wall, it is worth while to humble him and keep him in Order. For which purpoſe (beſides what has been already ſaid)

said) I sometimes plash the most vigorous Branches, cutting them near the place from whence they shoot, more than half through, which effectually checks its Vigour, and consequently renders it more disposed to make weaker Shoots, and form bearing Buds. This Method of Plashing is also of singular Use, when you would avoid Barrenness, and have only an awkard Branch to make use of to fill the Vacancy: For by this means you may reduce it to what Order you please, so as to answer your purpose, and reward you with Fruit. But you are to take notice that this is not to be practised on any Tree but the Pear and Plum; the Trial would be too dangerous on the Peach or Apricot, because they would be apt to put out Gum at those Places, and so endanger killing the whole Branch.

I am aware that many recommend Grafting the Pear on a Quince stock, which indeed effectually cures too great Luxuriancy and Growth, and may for a time

time anſwer the Purpoſe of bearing quickly, (which therefore may make it worth while for them that have a great deal of Room to have ſome of theſe) but they are not long-liv'd, do not bear ſuch fair large Fruit, nor make ſuch handſome regular Trees, as thoſe grafted on a Pear ſtock, which I therefore chuſe to recommend to all thoſe who have not room to try doubtful Experiments.

You will eaſily diſtinguiſh the bearing Buds of a Pear-tree as ſoon as the Leaves are off in *November*, which are much fuller and more ſwell'd than others; which is to be carefully minded, that you do not cut them off in your Pruning. All falſe Wood, or, as others call them, Water-ſhoots are to be taken away, being eaſily diſtinguiſhed by their having Eyes at much greater diſtance than ordinary from one another: Theſe are found in moſt vigorous Trees, eſpecially Peaches. The Cock-ſpur is alſo to be taken off, *viz.* the Extremity of the laſt Year's Pruning. It is to be managed as the Peach in the Summer. *The*

The FIG.

As this Fruit is commonly little known, and less valued by any but those who have *Gustum Eruditum* (in *Petronius*'s Phrase); so (as far as my Observation has gone) the Management of the Tree seems to be as little understood. For as I have hitherto given Directions for the right Pruning of other sorts of Trees, so I must here direct and recommend the not Pruning at all. The not understanding of which has, to my Knowledge, been the occasion of that Barrenness, so visible in many Noblemen's and Gentlemen's Gardens. There is no Tree that doth generally produce more certain and plentiful Crops than this, if it be rightly manag'd, or rather if you keep the Knife from it.

But when I say it must not be pruned, I only mean that its tender Branches are not to be shortned, as in other Trees; because it is plain it puts forth its Fruit chiefly at the Extremities of the last Year's Shoot,

Shoot, commonly at the three laſt Eyes; any part of which if you take away, you cut off and deſtroy ſo much Fruit. But yet this muſt not be ſuppos'd to hinder you from taking out the great Wood entirely, to avoid Confuſion, and alſo to cut ſome of the weak ſmaller Shoots cloſe to the great Wood, theſe being of no Uſe but to exhauſt Sap. Whatever therefore you cut from the Fig, you muſt do it as cloſe to the Root, or any great Wood as you can, and that no earlier than the latter end of *March*, for fear of Froſts and cold Rains: Only it is adviſeable to tack its beſt and biggeſt Branches cloſe to the Wall in *November*, that they may be the better ſhelter'd from the extreme Froſts in the Winter. Be ſure to keep it free from Suckers, which this Tree is apt to put forth plentifully. And I think there need nothing farther to be ſaid for the Government of this Tree, if the three firſt General Rules be but obſerved as they ought.

Cherries and Plums require little Skill to make them bear againſt a Wall in almoſt any Soil, and therefore there needs nothing to be added to the general Obſervations laid down. I ſhall only take notice, before I conclude this Chapter, that both Winter and Summer *Bon-Cretien* Pears want more Room to ſpread and extend themſelves than any other; and therefore if you expect them to bear, you muſt allow them Elbow-room and Height too; for if you ſhould confine them by ſhort Pruning, they will grow Knotty, and full of Wood without Fruit. I have my ſelf ſeen the Summer *Bon-Cretien*, in the Garden of my worthy Friend Dr. *Wickart*, now Dean of *Wincheſter*, bear plenty of noble large Fruit, betwixt twenty and thirty Foot high. There alſo I have eaten excellent Figs, from a proſperous Tree, even the ſame that afforded ſome to King *James* I. near a Hundred Years ago, as appears (I think) from a *Memorandum* on the Wall.

CHAP.

CHAP. VI.

Of GRAFTING *and* INOCULATING.

THeſe two Operations in Gardening are pretty Philoſophical Entertainments to a Lover of Curioſities in Art and Nature; and therefore, tho' they have been fully treated of by others, yet becauſe they make up ſo great a part of a Gardener's Diverſion and Pleaſure at two ſeveral Seaſons of the Year, I ſhall deſcribe and explain the Method of performing both diſtinctly, that this ſmall Treatiſe may not be thought defective in ſo conſiderable a Point.

There are ſeveral ways of Grafting, but I ſhall mention only two, that I think moſt proper to the ſeveral Kinds of Trees. The firſt is that common way of Slit-grafting, which is performed on Pear, Cherry, and Plum-ſtocks, eſpecially if they are of any bigneſs; by firſt chuſing a ſmooth Place in the Stock where you would graft, cutting the Head off ſlope-

wise; then *even* the Top of the Slope Horizontally with your Knife, making a Slit down the middle of the Stock discreetly with a strong Knife, or otherwise; then prepare your Scion taken from a vigorous Shoot of the foregoing Year, sloping it on each side from a Bud or Eye, so that it may conform it self to the Slit in the Stock, the Bark of Scion and Stock closing exactly. Let it be daub'd pretty thick over with Clay temper'd with short Hay, taking care not to disturb the Scion, which must not be left with above three or four Eyes above the Stock. The other way is much preferable to this, but can ordinarily be perform'd only on Apples and Hollies, the Bark in others not handsomely parting from the Wood, as it must. The way is to cut off the Head of the Stock slope-wise, *&c.* as before, and instead of slitting the Stock, slit only the Bark a little above an Inch on the back-side of the Slope; then prepare your Scion made with a flat Slope about an Inch long ending on

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a Point, and begun from the back-ſide of an Eye; but becauſe it may diſturb the thin end of the Scion to raiſe the Bark of the Stock, where you made the Slit, get any other piece of ſmooth Wood cut ſlope-wiſe as the Scion, and thruſt it down betwixt the Wood and the Bark, which you will find readily to part, and then put in your Scion ready prepared, the Top of the Slope being thruſt as low as the Top-ſurface of the Stock. Clay it over as before, and leave as many Eyes. This I find to be almoſt a never-failing way for Apples and Hollies; and I prefer it to the other, becauſe it doth not give ſo grievous a Wound to the Stock by ſlitting it, which ſometimes proves fatal. Beſides, in this laſt way the Scion does much ſooner heal over and cover the Stock, whereby the Union is entirely compleated.

The firſt Operation muſt be perform'd on Pears, Cherries, and Plums, the latter end of *February* or beginning of *March*, but Hollies and Apples muſt not be

grafted till the beginning of *April*; it is convenient that your Scions be cut off a Fortnight or three Weeks before you uſe them, and laid in the Shade.

But notwithſtanding both theſe Ways may prove ſafe and proper Methods for propagating thoſe ſeveral kinds of Fruits, yet I much rather prefer, and therefore recommend that other Operation called Inoculation or Budding, the Method of which I ſhall now deſcribe: Cut off a vigorous Shoot from a Tree you would propagate any time a Month before, or a Month after *Midſummer*; then chuſe out a ſmooth Place in your Stock (which ſhould not be of above three or four Years growth) making a downright Slit in the Bark of it a little above an Inch long, and another croſe-wiſe at the bottom of that, to give way to the opening the Bark. Then with your Penknife (not too ſharp at the point) looſen gently the Bark from the Wood on both ſides, beginning at the bottom; which done, prepare your Bud taken from

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the aforesaid vigorous Shoot, which must be cut off with a sharp Penknife, entring pretty deep into the Wood, as much above as below the Bud, to the length of the slit in the Stock as near as you can guess. After the Bud is thus cut off with the point of the Penknife and your Thumb, take out the woody part of the Bud; and if in doing this the very Eye of the Bud come out, and leave a deep Hole, throw it away, and take another. Then put this Bud in between the Bark and the Wood of the Stock at the cross-slit already opened, leading it upward by the Stalk where the Leaf grew, 'till it exactly closes: Then bind it about with coarse woollen Yarn, the better to make all parts of it close exactly, that the Bud may incorporate itself with the Stock, which it will do in three weeks time, when you must loosen the Yarn, that it do not gall the place too much, as it will be apt to do in a vigorous Stock. This Operation is best perform'd in a cloudy Day, or at an

Evening; and you are to observe, the quicker it is done, the better it will succeed. For tho' a pretty many words are necessary to describe the Method of doing it, yet after a little Practice, and that you are become ready at the work, thirty Inoculations may be done in an Hour: But you may take notice, that it is convenient to put in two or three Buds into one Stock, especially Peaches and Nectorines, that you may have the better hazard of having one Hit, which is enough.

Peaches, and Nectorines, and Apricots are not to be raised any other way but by Inoculation; and as for Pears, Cherries, Hollies and Plums, tho' (as I have shewn you) they may be Grafted, yet I prefer Inoculating them, for these following Reasons.

(1.) Because it is the surest and less hazardous way; nay, if the Stock be but vigorous, and not over-big, it is almost a never-failing way; for by putting in two or three Buds into one Stock, it will

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ſeldom ſo happen but one of them will hit, and that's enough; whereas in Grafting you are forc'd to make a dangerous Experiment, by cutting off the Head of the Stock; and if the Scion do not take, the Seaſon is loſt, and your Stock maimed.

(2.) I prefer Inoculation, becauſe it may be performed by any Gentleman himſelf, with more Pleaſure and leſs danger to his Health. It requires no daubing with Clay, only a Penknife and a little woollen Yarn, which are both portable, and therefore always ready to be made uſe of, whenever his Meditations ſhall give way to his Pleaſure. Beſides, this Operation is perform'd in Summer and warm Weather, when it is healthful as well as pleaſant to be buſied in a Garden with ſome ſuch little Amuſement. Whereas the ſeaſon of Grafting is in the Spring, when there is more Danger of taking Cold in a Nurſery, where you muſt expect wet Feet and dirty Hands.

Laſtly,

Lastly, if you begin to bud in *June*, and you find it doth not succeed, (as you may find in three Weeks) you may make a second Attempt the same Year on the same Stock, and that with very good Success: For in some cases a Disappointment is very undesirable; as when you would change the kind of Fruit on a Stock against a Wall, the sooner your End is compass'd, the better.

However, if you are forc'd to practise upon large Stocks, you must be content to graft, because when the Bark is become thick and stubborn, it will not readily part, nor so handsomely close upon the Bud. But if the Graft happen to miss (as it will be very apt to do in large Stocks, if you do not take care to leave a leading Branch to carry up the Sap which would otherwise choak the Scion) those slender Shoots which shall be made near the Grafting-place will do right well to inoculate on, sometimes even in the same Year.

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The Cherry, Plum, and Pear, but eſpecially the latter, if the Stocks be any thing vigorous, almoſt never fail to anſwer your Expectations in Budding; and there is one more Advantage here, above what can be had in Grafting with reſpect to the Plum, *viz.* That you may inoculate pretty ſurely any Plum on a Damſon, or Wild-Plum-ſtock, which yet will be ſure to fail you if you Graft on it. But yet this General Rule is always to be regarded, with reſpect not only to this, but all other Stocks; that 'tis a vain Expectation to hope for Succeſs if the Sap do not run well (as we ſay) that is, if the Bark will not readily be perſuaded to part from the Wood of the Stock by the help of the Penknife.

No ſort of Fruit is more untoward, and more apt to deceive you in Budding than the Apple, becauſe the Bark is not ſo ready to part as in other Fruit. Yet I have my ſelf practis'd it ſeveral times with Succeſs on vigorous Shoots put forth near the Place where the Graft failed.

Any

Any time between the beginning of *June* and the latter end of *August*, Allowance being made for different Seasons, you may Inoculate most Trees; nay, I have several times Inoculated Pears in *September* with good Success. But it must be taken notice of, that the Branch or Shoot which you make choice of for Buds to inoculate with, must not lie by any time (as in Grafting) but must be immediately made use of, as before directed.

The several Kinds of Oranges, Lemons, strip'd Philarea's and Jessamines, are to be propagated by Inoculation. And now I mention the Jessamine, I cannot but take notice to you what a noble Demonstration, the yellow strip'd Jessamine has afforded us, of the as certain Circulation of the Sap in a Tree, as of the Blood in the Body of an Animal; which matter, altho' it has been believ'd by some, yet it has been denied by others. And therefore because it has not as yet (as far as I can learn) been brought

brought to any Certainty or Demonſtration, I ſhall here relate the Means of this noble Diſcovery by virtue of Inoculation.

Suppoſe a plain Jeſſamine Tree, ſpreading itſelf into two or three Branches from one common Stem near the Root. Into any one of theſe Branches in *Auguſt* inoculate a Bud taken from a yellow ſtrip'd Jeſſamine, where it is to abide all Winter; and in the Summer, when the Tree begins to make its Shoots, you will find here and there ſome Leaves ting'd with Yellow, even on the other Branches not inoculated, till by-degrees in ſucceeding Years the whole Tree, even the very Wood of all the tender Branches, ſhall be moſt beautifully ſtrip'd and dy'd with Yellow and Green intermix'd. It is not material whether you cut off the Branch above the Inoculation to make the Bud itſelf ſhoot; for it will have the ſame Effect of tinging by degrees all the Sap of the Tree, as it paſſes by or through this Bud, and communicating its Virtue to the moſt diſtant and oppoſite Branches, tho'

tho' the Bud it self should not shoot out. Nay I have my self several times experienc'd that if the Bud do but live two or three Months, and after that happen to die, or be wounded by any Accident, yet even in that little time it will have communicated its Virtue to the whole Sap, and the Tree will become entirely strip'd. This Discovery undoubtedly proves the Circulation of the Sap. *Q. E. D.*

What farther Uses and Observations may be made from hence, I leave to other Philosophical Genius's and curious Enquirers into Vegetable Nature; and shall only add to this Chapter, that when you find in the Spring, or the time when the Tree begins to shoot, your Inoculation takes, and the Bud looks green and fresh, you must not forget in all cases (except this of the strip'd Jessamine) to cut off the Head of the Stock slopewise about an Inch above the Bud, the slope ending on that side where the Bud is. It may not be amiss also to add, that where you put in more than one Bud, it is not con-

convenient to place them juſt one above another, but ſidewiſe.

CHAP. VII.

Concerning the proper Diſpoſition of Trees againſt a Wall; the beſt Kinds of each; their Order, and Time of Ripening.

IN ſpeaking to theſe ſeveral Points, there are great Allowances to be made for the great variety and difference of Soil, which as to the ripening and perfecting of Fruit has more in it than moſt People are aware of. For I queſtion not but a good Soil, *viz.* a rich, deep, ſandy, mix'd Earth, in fifty four Degrees of Latitude, will do more towards accelerating the Ripening the beſt Fruit, than a bad one, *viz.* a ſtiff cold Clay, will do in fifty one. And ſo a North-weſt Wall in an extraordinary good Soil will do as well for a Buree or a Vine, as a South-weſt Wall will do for the ſame in a bad one

one in equal Degrees of Latitude. The Rules therefore that I should lay down must be calculated for the common State and Condition of most Places in *England*, which generally want all the Advantages that Art can give them to Ripen the best and latest Fruit. Most that know any thing of Gardening can tell, that a Peach, an Apricot, and a Vine are to be set against their best Walls; but as for Figs and Pears, tho' of the best *French* sort, they are ordinarily crouded into any Corner, or against a North east or North-west Wall; whereas in truth many of them deserve the very best Place in the Garden, especially in such a Garden as lies upon the moist Clay, which yet may be made, by the Directions already laid down, *Chap.* 1. agreeable enough to the best Pears, Figs, and Plums. And truly those who have the Misfortune of a cold Soil, I cannot but advise not to strive too much against Nature, in aiming to have the late Frontiniack Grapes, or the choicest Peaches, especially if they lie

open

open and unguarded from the cold Winds, their Expectations will be quickly tired with watry, unripe Fruit; whereas if they did but ſuit their Soil with proper kinds, they might be rewarded with ſomething good: For I am of Sir *William Temple*'s Mind, that a good Plum is much better than a bad Peach.

As to an exact and proper Catalogue of the beſt kinds of the ſeveral ſorts of Fruit, no other can be expected than what the Author moſt approves of himſelf, who, in this caſe, can be ſuppoſed to act no otherwiſe than is common with a Phyſician as to his general Rules and Directions in Diet for preſerving Health, *viz.* to preſcribe what he loves himſelf. If then there is not found in this ſmall Catalogue (ſuited to the Garden and Perſons deſigned) that particular favourite Sort which ſome Perſons may expect, let it not be concluded that all others but what are here named are condemned as naught; but rather that it is thought adviſeable not to perplex a Lover of Fruit

with an unnecessary number and variety of sorts, when he has room only for a few good ones of each Kind. He that has room, and would encrease his Collection, may have recourse to Monsieur *Quintinye*, or to the Abridgement by Mr. *London* and *Wise*, and he will quickly have his Curiosity satisfied. In the mean time I shall satisfie my self with such a Collection as seems most proper and suitable to the Garden I am supposing. But before I begin it, I ought to say thus much first, That it must not be thought strange, if sometimes the Fruit here recommended do not answer, but prove watry and insipid, there being a certain agreeableness of Soil peculiar to almost every kind of Fruit; at least thus much is certain, that a good sort of Fruit may prove bad in such a Soil as will make another good sort excellent in its kind; and the best Peaches may prove bad, where Pears and Apricots will excel; neither ought we too hastily to conclude and give judgment against what may only

only prove bad from an unkind Season. But when it is found by Experience that the Soil and the Kind do not agree, the best way is to lose no more time, but either prepare another for his place, or alter the sort by Inoculation, which is very easie and quickly to be done, if the Stocks be good, and not too big

The best Peaches to be planted against a South-Wall, (or inclining to the East or West) as follow in the Order of their Ripening:

	Ripe.
The White Magdalene, The Minion,	Middle of *August.*
The Right Old *Newington*, The Chevreux,	Beginning of *Sept.*
The Admirable, The Nivet,	Middle of *September.*
The Red Roman Nectorine,	Middle of *September.*

Apricots will do against East and West-Walls.

	Ripe.
The Masculine Apricot,	Middle of *June.*
The Orange Apricot,	Middle of *July.*

Figs must be planted against a South-East or South-West Wall. Only two sorts good,

The White Fig, The long Purple Fig,	End of *August.*

A Catalogue of the best *French* Pears that require the best Wall and Aspect you can give them, and will not be ripe till some time after they are gathered.

	Ripe.
The Summer Bon Cretien,	Beginning of *September.*
The Buree du Roy,	End of *Sept.*
The Verte-Longue,	*Octob.*
The St. *Germain,*	*Novemb.*
The Spanish Bon Cretien,	*Novemb.*
The Ambret,	*Decemb.*
Colmar,	*Decemb.*

Chrysan,

Chryſan, *Decemb.*
The Winter Bon-Cretien, *March.*

Some other good Pears that will do on North-Eaſt or North-Weſt Walls;
The Orange Bergamot,
The St. Katherine, } *Septemb.*
The Rouſſellet,
The Black Pear of Worceſter,
The Pound Pear, } for Baking.

Peculiarly good for Dwarfs;
The Swan's Egg, [*Nulli ſecundum*] *Octob.*
The Bergamot, } both well known in
The Windſor, } *England.*

The foregoing ſorts, recommended for North-Eaſt and North-Weſt Walls, will alſo do well for Dwarfs, if occaſion be; as there are alſo many other ſorts might be added: but needleſs Varieties I recommend not.

It is very adviſeable to plant in ſuch Places as are moſt expoſed to Comers and

Goers, those Kinds of Winter-Pears that are hard and unpalatable, whilst they are on the Tree; otherwise the Owner will reap little else but Disappointment and Vexation. That side of the House, or indeed any of the Out-houses, which is exposed to the South, will do singularly well for the Ambret, the St. Germain's, but especially for any of the *Bon Cretiens*, (except the Summer, which is too tempting) these loving room and height; and as delicious Fruit as they are, will not abide to be tasted a second time when newly taken from the Tree. The Winter *Bon Cretien* is remarkable for keeping longest, and all the sorts of them are as remarkable for answering so well the Purport of their Name *Bon Cretien*, or *Good Christian, Sound at Heart*; (the right sort alas! hard to be met with) for as in time they begin to decay and rot in the outward parts or pulp, so it is observ'd that the Core or Heart continues generally sound to the last.

There are ſeveral ſorts of Grapes, and moſt of them in ſome good Years will ripen in *England*; but I think the white Muſcadine and the black Cluſter Grape are the only ſorts that one may depend upon to have ſome pretty good almoſt any Year. I need not ſay that all of them expect the beſt Wall and Aſpect we can give them, to help them to that Maturity and dulcedinous Juice which make it either pleaſant or ſafe to eat them in any quantity. But let the Wall or Aſpect be never ſo good, yet I muſt repeat it, that if it lie open and expos'd, without any break of Hills or Wood at a diſtance, you will certainly be deceiv'd in your expectations of good Fruit.

The white Raiſin-Grape, admirable for Tarts, where there is room enough.

There are alſo a great variety of Plums, and ſome of them ſo good as to deſerve the beſt Walls, as the blue and white Perdrigons and Imperial Plums; but ſuch as follow are thoſe I recommend for Dwarfs,

Standards, or North-East and North-West Walls:

The Orleans,
The Muscle,
The Queen-Mother,
The Damascene,
The Violet,
} Plums.

Fothering, a good Bearer, fine Plum.

Perdrigon, blue and white, very good.

Le Royal, the best Plum that grows; but a bad Bearer.

Drop of Gold, a yellow Russet, good.

The white Bonum Magnum,
The Pear-Plum,
} for Baking.

The Damson every one knows to be good, and it is to be raised from the Stone, or by Suckers without grafting, best a Standard. There are many other good sorts which I mention not, because they are generally idle ill Bearers.

Most Cherries will do on Dwarfs or Standards, but are mended against a Wall: As,

The

The Orleans or Bloody Heart, } on East or West
The *May*-Duke, } Walls.
The Morella on a North Wall.

But the Common Flemish is quite spoil'd against a Wall.

It will be necessary before I conclude this Chapter to add, That the time of Fruit's Ripening is very different in different Years; and tho' I have fix'd the general time, yet it must not be wonder'd at if a bad Year make some Fruit, especially Winter-Pears, a Month or two later before they come to their Maturity; only I have observed, when they much exceed their usual time of Ripening, they are never so good, and have not their true rich Taste.

N. B. When it is advised here to plant such a Tree against a South Wall, if that Wall happen to decline some few Degrees to the East or West it is never the worse, but altogether as good, provided the Declination be not above fifteen or

twenty

twenty Degrees, because in that Case the Wall would enjoy the same Time, and as many Hours of Sun-shine: But when I say an East and West Wall will do for an Apricot, 'tis supposed that there is not the least Declination towards the North; for that would wholly defeat the Design and Expectation of the Planter; so that if it have any Declination, it were to be wish'd it had it toward the South.

N. B. An East Aspect is better for all sorts of Fruit than a West; not that it can be supposed to have more Hours of Sun-shine; but because the early Rays of the Sun take off those cold Dews which are apt to fall and hang upon Fruit in the Night, which in the Case of a West Wall are not taken off till later in the Day, and consequently the Fruit is more subject to be chill'd. Whether this will be thought a good Reason or the only Reason I cannot tell; but thus much is certain in experience, that an East Wall

is

is better and kinder for all Fruit than a Weſt; and I cannot eaſily be brought to believe that there are any peculiar inherent Virtues and Qualities in the Eaſtern Rays of the Sun that ſhould cauſe this difference in Vegetation.

N. B. I have ſaid nothing about the Management and Culture of Rasberries, Strawberries, Gooſeberries and Corants, becauſe little Skill is required, beſides this one Rule, that they are not to ſtand too long in a place, nor above four or five Years before they be renewed, eſpecially Strawberries, which muſt be kept clear from Runners all the time of their Bearing.

N. B. It is of very miſchievous, if not dangerous Conſequence, to let Roſemary grow too near any of your Fruit-Trees, eſpecially if they be young; for that will not fail to rob them of ſo much of their proper Nouriſhment, as that they will be infallibly weaken'd, if not in danger of being kill'd.

The CONCLUSION.

I Have now gone over some of the most considerable Particulars relating to the Art of *Gardening*, and (I hope) not *mal à propos*. Thus much, at least, I have endeavoured, To speak intelligibly, to lay down my Rules and Observations in a tolerable Method, and to avoid unnecessary Prolixity: All which I have constantly had in my Eye, that I might in some degree attain the End I aim at, *viz.* To make those Persons (especially those of my own Order) who may not have had so much Experience in this particular Science, in love with so innocent, so agreeable, and so profitable a Diversion.

I might have added (as some others have done) a Chapter about the several Diseases which the different sorts of Trees are subject to; but except a proper Remedy were also added, it is to little purpose

poſe to mention the Diſeaſe: And as far as my Obſervation has gone, I plainly perceive moſt are incurable, and therefore have always choſe to have recourſe to my Nurſery for another to put in the place. The Gum and Canker are plainly incurable, and the part affected muſt be cut off, except there remain a ſound part ſufficient to convey the Sap: Wet cold Soils are moſt ſubject to theſe; and therefore in ſuch Caſe, the beſt preventing Phyſick you can give, is to plant high. Moſs ſhou'd be carefully rubb'd off with the back of a Knife or piece of Haircloth, after a Showre of Rain.

Becauſe both Graſs and Gravel-walks are ſo much the Ornament and Beauty of a Garden, and do afford ſo conſiderable a Pleaſure to a thoughtful, contemplative Perſon, I cannot but here inſert a ſpeedy effectual Method of deſtroying Worms, thoſe filthy Annoyers and Spoilers of the Beauty of all Walks.

At any time in Autumn fill a Ciſtern or any large Trough with Water, putting

ting thereinto a large quantity of Walnut-Leaves, where let them ſteep at leaſt a Fortnight or Three Weeks; in which time the Water will have received ſuch a Bitterneſs, that if you pour gently a ſmall quantity of it on ſuch places as are moſt annoyed with Worms, by that time the Water can be ſuppoſed to reach them, you will find the Worms hurrying in great Confuſion out of their Holes, ſo as to crawl in great plenty under your Feet upon the Ground, where they may be gather'd up and thrown away. They may indeed be taken by a Candle and Lantern in a Summer's Evening after Rain; but this may be practiſed at any time in the Day with pleaſure, and it will certainly deſtroy them, if it be but carefully practiſed and repeated: Only be ſure to put Walnut-Leaves enough, that the Water be very bitter, otherwiſe it will do no good.

It is very convenient to have ſuch a large Ciſtern or Stone-Trough as I here ſpeak of, as for the foregoing Uſe, ſo alſo for

for a Treasury of Rain Water, wherewith to refresh your Flowers and new-planted Trees in the Droughts of *April* and *June*. And for this Reason it should be fix'd under such Parts of the House where the greatest plenty of Rain-water is made to descend, where also it will be found to be not a little serviceable to the Family in the Winter. And if it shall be thought difficult (as indeed it is) to procure such a sort of Stone as will indure the hard Frosts in the Winter; as a Remedy for this, I my self made an Experiment upon a very brittle Stone-Trough, which the Mason himself told me would not endure the Frost, and it succeeded according to my Expectations. I used it for salting Meat in the House for two or three Months, till I thought it was throughly soak'd with Brine, and then set it abroad, and it has already endured six Winters, and defied even the great Frosts in 1708.

N. B. I have said nothing concerning Apples, because they are generally Standards,

dards, and require little Art to manage them; and if they are Dwarfs, must be ordered as Pears. It would be endless to mention the best Kinds; For those are the Best, that are best and most prosperous in that particular Soil and Place: each County having commonly its known and peculiar sort of Apple, which they call Best, which would not, it may be, prove best in another.

FINIS.

The
Gentlemans
Recreation
pr: for B: Lintot

THE *Gentleman's Recreation*: OR THE SECOND PART OF THE ART of GARDENING IMPROVED.

Containing several New Experiments and Curious Observations relating to Fruit-Trees:

Particularly, a New Method of building Walls with *Horizontal Shelters*.

Illustrated with Copper Plates.

——*Si quid novisti rectius istis,*
Candidus imperti; si non, his utere mecum. Hor.

By *JOHN LAURENCE*, M. A.
Rector of *Yelvertoft* in *Northamptonshire*.

To which is added by way of Appendix, A new and familiar way to find a most exact Meridian Line by the Pole-Star; whereby Gentlemen may know the true Bearings of their Houses and Garden Walls, and regulate their Clocks and Watches, &c. By *Edward Laurence*, Brother to the Author of this Book.

The Second Edition

LONDON: Printed for Bernard Lintott between the *Temple-Gates* in *Fleetstreet*. 1717.

THE

PREFACE.

THE Encouragement and favourable Reception which my former Treatise of Gardening hath met with in the World, makes me here engage a second time on the same Subject, and venture to enlarge on some Experiments and Observations, which the Nature of that intended short Essay suffered me only just to touch upon.

I was afraid of engaging too far at first, lest I should not be able to make an honourable Retreat: But since the Gentlemen as well as Clergy, have been pleas'd to accept and like what I have delivered in a plain and familiar manner, and

have generally honoured it so far as to complain only of its Brevity; Decency and good Manners oblige me to remove those Complaints, and to address my self now to the Gentlemen, as I have already done to those of my own Order, perswading them also to love a Garden by the same two powerful Motives of Pleasure and Profit.

The Apology for engaging in these Matters as a Clergyman, I will not repeat, because it hath been very kindly admitted: Neither indeed do I look upon this Science so remote from the Business of a Clergyman, as is generally thought. It is a mix'd Subject; and the Moral is, as it were, interwoven with the vegetable World. Man having an active, busy Principle within him, it is of great Consequence what sort of Entertainment and Exercise of the Mind he chooseth; for, according to that Choice, he either dignifies or dishonours his Nature.

It is no small Felicity to a Man, when his Pleasure tends also to his Perfection:

fection: For most Men's Pleasures are such as debase their Natures; and we commonly gratifie our lower Faculties, our Passions, and our Appetites; and these do not improve, but depress the Mind.

All the extravagant Pursuits of Ambition and Avarice, of Lust and Revenge, of Luxury and Intemperance, do of themselves tend to debase Man's Nature, and sink it down into a great Resemblance of that of the Beasts below him. Whereas on the other side all the manly Exercises of Reason and Religion, of Devotion and Contemplation, of Justice and Charity, give such Beauty and Lustre to human Nature, that it is raised thereby to a very near Resemblance of the Angelick Order: So that indeed according to the way of Life, such is Man's Nature; either made worse, or much improved.

'Tis true, we know not the Nature and Laws of the Union of Soul and Body, and therefore cannot easily determine how the Thoughts of our Minds and the Mo-

tions of our Bodies act in Dependence one upon another. We know not what are the primary Differences of Genius's and Complexions, and how our Intellectuals or Morals depend upon them. But I have often thought, there are many Ideas of Pleasure, that have lain buried in the Ruins of corrupt Nature, for want of being early roused, and made to exert themselves by proper Objects, before the over-bearing Power of sensual Delights hath taken place. And therefore I question not, but we might soon see a more virtuous and enlightened Age, if it were but rescued from the intolerable Tramels of Logick and Rhetorick, the Aversion and Bane of Youth, and some of the easy Parts of Natural Philosophy, Practical Mathematicks, and Gardening Operations substituted in their Place: By which means, young Persons may be discreetly tol'd on by easy and familiar Methods, in all such innocent Exercises of the Mind and Entertainments of Life, as may probably lay a Foundation for a contemplative

templative Genius, and produce a virtuous and useful old Age.

Had Man continued in the Garden of Eden, *as he came out of the Hands of his Maker, I doubt not at all but Contemplation and Devotion would have been his chief Exercise and Delight; as most suitable, not only to the* State, *but to the* Place *of Innocence: And I as little doubt, that if Angels were confined to these lower Regions, they would seek the Retirement and Pleasure of a Garden, as most agreeable to their heavenly Dispositions.*

* *How soon and in what manner a* Palingenesia *or Renovatiom of Things is to be expected in the* Millennium *is not my proper Business here to enquire: But thus much is to my present Purpose to say, that the more we accustom our selves to the several intellectual Pleasures of Meditation, Contemplation and Devotion, the fitter shall we be to regain Paradise; those divine Exercises raising Men's Minds into*

* Isa. 65. 17. Mat. 19. 28. Act. 3. 21. 2 Pet. 3. 13. Rev. 20. 4. Ch. 21. 1, 2, &c.

a greater Similitude of the divine Nature, that so, in Irenæus's * *Sense,* paulatim assuescant capere Deum, *they may by degrees accustom themselves to receive God.*

The Exercise of a Garden and the Entertainments of Contemplation will appear still the more desirable, if one considers how difficult and dangerous a thing Conversation is now become, and indeed made so by the corrupt Passions and Humours of Mankind. For how difficult is it, for even the wisest and most cautious Man, to start a Subject in Conversation that shall be pleasing and inoffensive? To talk of the Weather is low, mean, and peasantly. To extol the Excellencies of Friendship, and to enumerate one's Friends is good; but how hard are they to be met with? To rail at our Enemies, and to detract from those we envy, how unchristian is that Practice, and truly offensive to a great and generous Soul? And then I suppose I need not tell a thinking Man the Uneasiness of being ty'd to the impertinent Con-

* L. 5. Cap. 32.

versation

verſation of ſuch, as can talk all Day and ſay nothing.

Indeed the Subject of Philoſophy, or any real uſeful Point of Learning, is pretty, if one could but ordinarily *hope to find Philoſophers or learned Men. Beſides, (ſhall I not ſay?) It is not every Point of Learning that muſt be ſtarted or will be born with. Divinity for inſtance; eſpecially any of the more nice and abſtruſe Points thereof, is one of the* Noli me tangere's. *Articles of Faith explain'd, which the Church is* in Poſſeſſion of, *are held by a ſort of entailed Right from the fourth Century down to the preſent Times: How much improved, I will not ſay. Infallibility is indeed plainly diſclaim'd by Proteſtants: but yet, ſtrange as it may ſeem, an* indiſputable *Authority in the Church will be maintain'd, and private Perſons will not be ſuffered to doubt of, or diſpute ſo ſacred a thing as a long Tradition.*

What now is to be ſaid to theſe things? Learned Men are not to be met with e-

very

very Day, *and Texts of Scripture are already ſettled: There remains hardly any general Topick of Diſcourſe but Politicks; and yet, tho' every one pretends to much Skill in it,* that *of all others requires the greateſt Prudence to enter into it, or to manage it without danger of Offence to one ſide or other. For except a Man can reſolve to be thorough-paced, to go through thick and thin with a Party, he will hardly eſcape being charged with want of Zeal or want of Courage; tho' all wiſe By-ſtanders may eaſily perceive, that there are Numbers of both Parties will run into very unjuſtifiable Extremes. The Church, without any certain Idea or determinate Meaning of the Word, is always made the outward Mark of Zeal of one ſide and t'other: And if the Meaſures that are concerted for the promoting her Intereſt are not lik'd, you will not fail to be branded (if not for an Enemy to the Conſtitution, yet) for a* Renegado *or a* Falſe Brother.

Who

Who would now chuſe to thruſt himſelf into Company, when Company and Converſation are become ſo enſnaring and dangerous to an Honeſt Man? I confeſs, if Preferment be the thing a Man aims at, as what he either wants or waits for, if he have but Wit and Parts, he may in time compaſs it, by going all the Lengths *of a Party: But I am now ſpeaking to Gentlemen of Honour and Probity, who would ſerve their Country by thoſe two Principles, and themſelves with every thing that is innocent, ſafe, and entertaining. And ſhall I need to tell ſuch, that all the beſt and nobleſt Entertainments are to be met with in a Garden? There a Man may converſe with his God, by contemplating his Works of wonder in each Flower and in every Plant: And then the devout Admirer cannot but lift his Eyes and his Heart in praiſe of the great Creator of all Things.*

There a Man may converſe with himſelf, and conſider, that whilſt he is uncorrupted by vain Converſation, *whilſt he*

he is busie and innocent, his Garden is his Paradise, a sort of Heaven upon Earth, that gives him a Disdain to those low sorry Principles of Ambition and Avarice, that hurry on other Mortals to pursue the vain Phantoms of Honour and Wealth.

Others may plot, dissemble, and struggle to get Authority and Power, and All, it may be, to no purpose too; but here a Man is Lord of All, the sole despotick Governor of every living Thing. The tallest Cedar, as well as the lowest Shrub, is subject to his Government and Care. Faults may be found and mended without any repining or starting at Alterations. The Wanderer may be reduced, and the Crooked made strait by easie and gentle Methods: And because the Strength and Prosperity of any Government consists in the Multitude of People, the Barren may be made to rejoice in a numerous Issue.

In short, whatever Government even the Fancy can paint to him to be either better or more beautiful, that Form is presently submitted to. This is no imaginary

Pleasure

Pleasure neither, but real and personal; a Garden affording such pleasing Morals in all the Parts of it, that nothing but the greatest Stupidity could carelessly pass them by unapply'd.

However, it is not my Business here *so much to act the Part of the Divine as the Politician; not so much to direct the Application of these Things to the Mind, as to lay down such Rules of Government, as may serve to heighten the Satisfaction of a thinking Genius: A Man must needs of course form pleasing Ideas to himself, when he finds Heaven and Earth, Art and Nature all conspire to make him happy in his Retirement, and each Subject of his Care to make obedient Returns of Profit and Increase.*

I own my self to be no Judge of Politicks out of *a Garden, as what I take to be none of my Business; and whether* in *it I have drawn any pleasing Picture of Monarchy, or said any thing to the purpose of good Government, I must leave to the Judgment of all those ingenious Gentle-*

Gentlemen, to whom I here addreſs my ſelf; and ſhall only add, That I have the rather perſwaded my ſelf to engage in this Subject, with this View and Hope; that what I have ſaid of the Pleaſure and Profit of a Garden, may in ſome degree ſerve to abate the prevailing Vices of Ambition and Revenge, and re-inſtate a more manly Pleaſure, in the room of ſome boiſterous Exerciſes and faſhionable Diverſions, which too often end in the Diſhonour of Almighty God and our Holy Religion.

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THE

Gentleman's Recreation:

Being a SECOND PART of the Art of GARDENING Improved.

The INTRODUCTION.

NOTHING is of greater Consequence to any Gentleman that is a Lover of a Garden, than to have a Piece of Ground near him of a pliant, fertile Nature, a Soil easy and kind to all sorts of Trees and Plants, either natural

tural or made so by Art; because then he has the Pleasure of seeing every thing prosper and flourish, that he either sowes or plants. Whereas the Want of such a Blessing gives continual Uneasiness to him that has waited long, and still waits in vain for the desired Fruits of his Labours; especially if it hath been attended with great Cost and Charge ill apply'd. Happy indeed are those Persons that have a good Soil, where Nature itself performs so liberally, that there needs little Labour, Cost or Care to make both their Kitchen and their Fruit Garden to abound with Plenty of every thing best in its kind; such Persons are not so much concern'd with what I have here to offer to the World, as those are, who have many other Difficulties and Discouragements superadded to the constant and necessary Care required in a Garden either of Pleasure or Profit. However I flatter my self the follow-

ing

ing Inſtructions may give ſome general and uſeful Hints to ſuch a Genius, as loves to *improve* and *aſſiſt* Nature, and has a true Reliſh of the Beauty of Proſperity and Plenty in a Garden. For which Purpoſe I have always endeavoured to conſult the Inclinations of Nature, that the moſt *natural* Methods might be taken to have the moſt and the beſt of its Products. For I think 'tis a Rule amongſt Naturaliſts, that we ſhould *follow* Nature and not *leave* it. Though we may ſafely do many things, which Nature *would not* or *could not* do; yet we are never to hope for Succeſs, if we do any thing contrary to Nature *.

* I could never underſtand, why ſome Perſons ſhould take ſo much Pains to invert the Order of Nature, in making the Branches of ſome Trees take root, and then dig up the Roots to convert them into Branches; which if it *could* be done, ſo as to continue, could be of no manner of uſe; and muſt be reckoned among the *Difficiles Nugæ*. The like may be ſaid of thoſe Attempts of grafting Apples on Pear-Stocks, or Vines on Cherries, &c.

In my former Treatiſe on this Subject I endeavoured, not only to ſpeak plainly and intelligibly, what I thought proper to aſſiſt Nature in all its Productions; but alſo to range what I ſaid in Order, and put it into ſome agreeable Method. Whereas in this, which I deſign rather as an Appendix to the former, as it conſiſts of ſome additional Improvements and Obſervations, I hope it will not be expected that I ſhould obſerve a very exact Method. All thoſe ingenious Gentlemen, for whoſe ſake I have been perſuaded to communicate ſome farther Thoughts on this Subject, will, I preſume, excuſe and pardon that Defect; provided their Expectations be but in ſome ſort anſwered, by meeting with ſomething *new* and *inſtructive*: And yet I deſire nothing may be embraced for its *Novelty*, except at the ſame time it be ſupported by *Reaſon* as well as *Experience*. So that I humbly hope, if I do venture to go out

out of the common Road, it will not be interpreted to be any ſort of *Hereſy* in this Science; becauſe I now addreſs my ſelf to the politer Part of the Laity, to the Gentlemen of good Senſe and Judgment, who are not ſo apt to *ſhrink* and be *affrighted* at new Diſcoveries of undeniable and rational Truths, as ſome others are, who by their Profeſſion are commonly tied down all their Lives to one particular Set of Thoughts; whereby their Underſtandings and Judgments are often cramp'd, and are not ſuffered to act out of their own narrow Sphere.

If this ſmall Eſſay for ſome farther Improvements in the Art of Gardening, happen to fall into the Hands of ſome ſuch μικρόψυχοι, *narrow-ſoul'd* Perſons, I eaſily gueſs the Reception it will meet with. But for others, Gentlemen of a liberal Education and general Knowledge, with ſuch I have been ſo well acquainted, eſpecially

since the Publication of my former Treatise, and have received so many singular Favours from many of them unknown before, that as I think my self here obliged to acknowledge their undeserved Civilities, so I must also say, that I fear no Hardships or ill Treatment from that Quarter. I am very easy to think, that this small Essay, humbly submitted to the Judgment of wiser Persons than my self, will not fare the worse for coming from a * Clergyman, who always owns these Things to be the Fruits of his *Diversion*, not of his *Study*; having other Cares of much greater Moment always upon his Hands, and that lie next his Heart, even the difficult Charge of instructing and *leading* many Hundreds of Souls in the Way to Heaven.

* It may not be amiss to take notice here of the Answer which a profess'd Gardiner gave to a worthy Gentleman, a Friend of mine, who happen'd to ask him how he liked the *Clergyman's Recreation*. *Why alas! Sir* (says he) *the Author is a Parson.*

Having

Having premiſed thus much; before I proceed to give any particular Directions and Rules, I would have it yet obſerved, that the Deſign of the following Treatiſe is to put Gentlemen into a Method of having the *moſt* and the *beſt* of all ſorts of Fruit, and that in the *eaſieſt*, the *cheapeſt* and moſt *expeditious* way. Such an Attempt, I preſume, will not be *unacceptable*; and thoſe who have vaſt Gardens, much Walling, and a Multitude of Trees, and at the ſame time not Fruit ſufficient for their Table, will think it very *ſeaſonable* and *neceſſary*. I ſuppoſe I need not make an Apology for this; there are ſo many Gentlemen that have a feeling Senſe of it. It will therefore be worth while, firſt to aſſign the general Reaſons and Cauſes of that Defect, and then we ſhall be the better able to ſeek for a Cure and apply a Remedy.

The First General CAUSE *of* BARRENNESS.

ONE great Cause of the want of Fruit in many Gardens, is, a lying too much open and exposed to the Winds, especially the *West* and *South-West* Winds, which in many Parts of the Year made terrible Havock and Desolation in our Island; not only by *blasting* the Fruit in the Spring; but by *chilling* and *starving* the Fruit all the Summer, so as to hinder its coming to any due Maturity. And with respect to Standards and Dwarfs, there is no little danger of the Fruit being torn off before 'tis ripe by the Violence of unguarded Winds. There are commonly many Causes concur to the increasing this great Evil. As for instance; an open Vale betwixt two Hills at a distance; a long Canal with tall Trees on each side; or some Groves of Trees with large

large Opens or Viſto's between them. Theſe, with many other accidental Cauſes of Buildings, *&c.* do many times occaſion ſuch perpetual and violent Currents of Wind, that 'twere a vain Expectation to hope for either *much* or *good* Fruit in a Garden that lies open and expoſed to ſuch external Violence. I need not therefore ſay that the firſt and earlieſt Care muſt be taken to guard againſt this dangerous Enemy, by planting Limes or Elms in a *Quincunx* order at a convenient diſtance from the Garden; but as near to one another as may be, that no time may be loſt in procuring the deſired Fence and Security.

However I am well aware, that the Situation of a Garden may be ſuch, that this Evil may be in a manner incurable; and a Gentleman may have the Misfortune to find his Garden upon ſuch a Hill, and ſo expoſed on all ſides to the Violence of Winds, that no artificial Shelters *can* ſecure him,

him. In all ſuch Caſes, there is no other Remedy, but to change Place, to look out for a more convenient Situation at ſome greater diſtance from the Houſe, where a proper Piece of Ground may be allotted for a Fruit-Garden and nothing elſe; whence even Flowers and all unprofitable Weeds ſhould be baniſh'd. Neither ought this to be look'd upon as a chargeable Scheme, attended with any doubtful View of Succeſs: For I can eaſily make it appear, that in many other Caſes beſides this of being without Remedy ſubject to blaſting Winds, it is the ſureſt and moſt unexceptionable Method, to have a peculiar Piece of Ground allotted by it ſelf, diſtinct from that which is properly called the Garden of Pleaſure: The Deſcription whereof I ſhall reſerve to its proper Place; and ſhall only obſerve here, with reſpect to the particular Point I am upon, that there are theſe following Advantages attending

tending the preſent Scheme. For,

(1.) This will once for all effectually cure the Evil complained of: Inaſmuch as it cannot well be imagined that any Gentleman's Seat ſhould be deſtitute of a ſmall Piece of Ground ſufficiently well ſhelter'd from Winds, either by Trees, or Buildings, or both, if it be choſen diſcreetly for that Purpoſe.

(2). Another Benefit in this Scheme will be; That you will have a Fruit-Garden exactly to your Mind, neither too little nor too big, and exactly right as to its proper Situation and Expoſition to the Sun, in all reſpects anſwering the Purpoſe of a profitable Fruit Garden, to be managed according to Art, with Trees, both Wall and Dwarf, ſet at their proper diſtances.

(3.) Here will be an Opportunity given for the building new Walls with *Horizontal Shelters*, which (as I ſhall ſhew preſently) are attended with incredible

credible Advantages, both for the ſecuring the Fruit in the Bloſſom from Froſts and Blaſts in the Spring, and for accelerating its ripening afterwards.

(*Laſtly.*) Another very conſiderable Advantage ſtill in the Choice of a new Garden, is, that there will be an untry'd Soil to work upon, which will infallibly produce vigorous healthful Trees, if it be rightly managed and choſen, and the Trees themſelves afford early, large, and beautiful Fruit, if they be pruned and ordered as they ought. To all which I need not add, that by Means of ſuch a little retired Garden, you will have the Fruits of your Care and Charge ſecured to you from all Comers and Goers, which in a large and ſpacious Garden of Pleaſure is found to be a Matter of ſome Difficulty.

But before I leave this firſt general Cauſe of Barrenneſs in a Fruit-Garden, *viz.* lying too much expo-

ſed,

ſed, I cannot but here take Occaſion to add, by way of Remedy and Cure; That there is commonly a very great Miſtake committed in building Garden Walls too high, even to the Height of 14 and 16 Feet. Which hath theſe two great Evils attending it, beſides the unneceſſary Charge of it; it ſubjects the upper Part of the Trees to the blaſting Winds; and it tempts the Gardener to run up the Branches of the Trees direct and perpendicular, in order to cover the Wall as ſoon as may be. This Method indeed will ſoon cover the Wall with Wood; but as it is contrary to the Rules of Art, there will ſoon plainly be diſcerned a Defect and Want of Bloſſoms and Fruit in the Middle Part of the Tree, which will be more viſible in the Pear than in any other ſort of Tree. But this being not the proper Place to rectify this Miſtake in Pruning, what I am here to obſerve and take notice of at preſent is only this;

this; That nothing but a manifest Want of Room can excuse or justify the building Garden Walls too high, when it is plain there is a certain Charge for a very uncertain and doubtful Profit. I have always thought that Eight or Nine Feet high is sufficient to answer the Purpose of the most vigorous Tree, provided it have but Elbow-room enough; and I suppose too that that Height will be thought a sufficient Guard against * foreign Invaders of Property; if at the same time you will but make this general Exception, That nothing is ordinarily strong enough, not even the

* It may not be amiss here to relate, That at my first coming to my Parish, I found some difficulty to preserve my Fruit from Robbers: Hereupon I resolved upon this Stratagem. I ordered the Smith to make a large Iron Trap with formidable Teeth to close one within another, which was to be called a *Man-Trap*. This was hung up several Weeks at the Smith's Shop *in terrorem*, giving it out, that now there would be great danger, if any one should attempt to rob my Garden. This, without setting the Trap, succeeded according to my Wish, and I have not been since robb'd these 12 Years. *Note*, Restrain'd, I hope too, not altogether by Terror, but from better Principles.

Grace

Grace of God, to ſtop and conquer the Perverſeneſs of Man's Will and his wicked Inclinations.

The Second General CAUSE *of* BARRENNESS.

HAVING under the aforegoing Head pointed at one great and manifeſt Cauſe of Unfruitfulneſs in many Gardens, and directed, as I hope, a ſufficient and proper Remedy, I ſhall now aſſign a ſecond general Reaſon for the ſame Defect, and I hope alſo I ſhall be able to apply an eaſy and effectual Cure. The Reaſon that I would here aſſign for Barrenneſs, is, the having too much Walling and too many Trees. This may look at firſt Sight like a ſtrange Paradox; That becauſe a Gentleman has great Variety of Walling and Abundance of good Trees, that *therefore* he ſhould have but little Fruit. But as ſtrange as this may ſeem, Experience

perience will justify the Truth of it, and I doubt not at all but to make it appear, there are good Reasons to be assigned, why it must, generally speaking, have that Effect.

For let it but be well considered what little Care is taken in a very large Garden, that every Tree have its due and proper Pruning, and we shall not wonder if they do not bear their proper Quantity of Fruit; nay, frequently that they bear little else but Leaves. The Grass and Gravel Walks shall not want their seasonable Mowing and Rolling: The several sorts of Ever-Greens shall not want their due Clippings to preserve their Beauty and Figure. The several sorts of Flowers are planted in their proper Earths, and removed at their proper Seasons, to give them all the Variety of Colours to please the Eye; All these Parts of a Garden are respected with, as it were, a religious Care, and complemented with their timely

timely Dreſſings and Culture, to give only an entertaining Proſpect and pleaſant View. And excepting the Caſe of ſome ſweet-ſcented Flowers and Shrubs, there is but one Senſe gratified with the Expence of nine Parts in ten of a fine Garden. For alas, after the Attendance that is given theſe things I have been ſpeaking of, what a little Portion of Time and Labour will be afforded the Fruit-Trees againſt the Wall, or the Dwarfs whereever they are? If the Wall-Trees can but be perſwaded to be brought within the Compaſs of a *Semicircle*, and the Dwarfs made a little *Concave*, all is generally thought to be well enough, without any great Regard had to what is proper to be choſen, and what to be refuſed; much more, without any Care to put the Tree into a bearing State for another Year. Nay it is but too commonly ſeen, that even the beſt ſorts of French Pears againſt the beſt Walls in ſome Gardens, ſhall have

no other ſort of pruning, than what a good Pair of *Sheers* affords them; whilſt it may be the Gardener would bluſh to have a *Weed* found in his Borders. I confeſs this ſort of unequal Management ſometimes raiſes Indignation in me, and I cannot here forbear to expoſtulate the Caſe a little with ſuch who are nicely careful to maintain Beauty and Regularity in all other Parts of the Garden, wherein they are to be commended; but will not be perſuaded to allot a due Proportion of Care and Labour to the nobleſt and moſt profitable Part.

For let us here but reflect a little, and reſolve (as we ought) to proportion our Value and Eſteem to the intrinſick Worth of Things, as they more or leſs ſerve to entertain the Senſes, and anſwer the innocent Appetites of human Nature. Do the ſeveral Colours in Flowers ſerve to ſtrike the Eye with their Variety and Beauty,

ty, and thereby form pleaſing Ideas in the Imagination and Fancy? What leſs than all this can we think the ſeveral Fruit-Trees, cloathed with their different colour'd Bloſſoms, will do? If they be managed with Art, what a pleaſing Entertainment is it to the Eye, to behold the Apricot in its full Bloſſom, white as Snow, and at the ſame time the Peach with its crimſon-colour'd Blooms, *both* beginning to be interſperſed with green Leaves? Theſe are ſucceeded by the Pear, the Cherry and the Plum, whoſe Bloſſoms and Leaves make a very beautiful Mixture in the Spring; and it cannot be a leſs pleaſant Sight to ſee Cluſters of ſwelling Fruit all the Summer, as the Earneſt of the full Gratification of another Senſe in Autumn. And now we are come hither, what Painter can draw a Landskip more charming and beautiful to the Eye, than an old *Newington* Peach-Tree laden with Fruit in *Auguſt*, when the

Sun has firſt begun to paint one ſide of the Fruit with ſuch ſoft and tempting Colours? The Apricot, the Pear, the Cherry and Plum, when they appear in Plenty as they ought, preſent themſelves to the Eye at the time of ripening in very inviting Bluſhes. In ſhort, all the ſeveral ſorts of Fruit-Trees have ſuch pleaſing Varieties, that were there no other Senſe to be gratified but the *Sight*, they may vie with a Parterre even of the fineſt Flowers. But then when we come to conſider, that all this Beauty rewards the careful Pruner with Plenty alſo of the moſt delicious *Fruit* to gratify the *Taſte*, there can be no Compariſon admitted, and no Excuſe can be made for the leaſt Want of Care, to aſſiſt Nature in her kind and generous Inclinations.

However it is the Obſervation of this *Want* of Care, and the manifeſt *Neglect* of the beſt and moſt profitable Part of a Garden, which has made me

me thus expostulate the Case, and with what View I have done it, may easily be perceived. For if, where there is much Walling, and Fruit-Trees abound in great Plenty, there is yet so unequal a Portion of Time and Art allotted for their Management, a necessary Consequence of that must be *Barrenness*, which is the Disease I am inquiring into. Having therefore here in some measure discovered the Cause of it, we are now to seek out for a proper Remedy and Cure.

Now there are but two ways of curing this evil of Barrenness, proceeding from a too great Abundance of Trees: Either first to allow a proportionable Help and Assistance, for the due and careful Management of so many Trees; or else secondly to *reduce* the Fruit-Garden, and bring it into a much less Compass, that every Tree may be sure to have its proper seasonable pruning and nailing. But why I prefer

this latter Method, much rather than the former, I shall give these following Reasons.

(1.) There is more Care and Attendance required for the due Management of a single Fruit-Tree, than is commonly thought on or expected. The Pear and the Vine especially, which require the best Walls, will not be put off with any *superficial* Pruning. The former must be frequently check'd, and even *maimed* in its most vigorous Parts, to hinder its luxuriant Growth; and the great Wood, especially in the middle, must be ever carefully rejected: And as for the Vine, *that* will not be satisfied with less than four several Prunings and Nailings within the Year. And shall I need to tell the vigilant Gardener, how much Business it is, to dispose according to Art the several tender Branches of a Peach or an Apricot? Now where there are great Numbers of such Trees in a Garden,

as

as far as my Obſervation has gone, they are generally neglected, and put off with much leſs Care and Attendance than they require; the neceſſary Conſequence whereof is *Barrenneſs*. To Cure which therefore, I ſhould think it a much better way to leſſen the Number of ſuch Trees, to confine the beſt Fruit-Garden to a narrower Compaſs, than to allow a proportionable Help, and what will be thought an extravagant Charge, for the proper Government of ſo many Trees; eſpecially if,

(2.) It be conſidered, that *that* may eaſily be ſhewn to be an *unneceſſary* Charge and Trouble: Becauſe, as will appear preſently, the End and Purpoſe of having a ſufficient Quantity of Fruit may be obtained in a *leſs* rather than in a *large* Garden; and conſequently at a much eaſier and cheaper rate. I always take it for granted, that every one covets to have as much Fruit as he wants, with

as little Charge, and in as small a Compass of Ground as may be; that is to say, in short, to have a great deal of good Fruit in a little room. If there are some who will not grant me this, I desire that what follows on this Head may go for nothing; but where it will be granted, I hope the following Reasons, Arguments and Calculations will be particularly considered, and I doubt not at all, but it will plainly appear, that many Gentlemen have hitherto been under great Mistakes, when they have enlarged their Gardens with that particular View and Expectation of having *more* Fruit.

To make this Matter then as clear and intelligible as I can, I have here annex'd two distinct Schemes or Plots, both furnished in such Order and with such Fruit-Trees, as are proper to their different Situations and Aspects to the Sun; whereby it will appear what Variety and what Quantity of good Fruit,

may

may with Reaſon and great Probability be expected from a little Spot of Ground, allotted ſolely and particularly for the Purpoſe of a Fruit-Garden. If it be here objected and wondered at, as I expect it will, that I ſhould allot ſo little walling, and ſo ſmall a Space of Ground, as only 40 Yards ſquare to ſerve a plentiful Table with Variety of the beſt Fruit, I deſire it may be particularly conſidered and examined, what probable Quantity of Fruit a Tree pruned and managed according to Art, may reaſonably be ſuppoſed to bear, and then I am perſuaded the Objection and Wonder will very much ceaſe, if not wholly vaniſh.

Let us then begin with the Peach, which in a bearing Year, and when the Tree hath well-nigh covered the Wall, will ordinarily bear a hundred or more of large fair Fruit; and if the Tree be in a proſperous State, kept free from great Wood in the Middle, and hath the Advantage of Heri-

Horizontal Shelters (of which more preſently) you need hardly ever fear having ſuch a Quantity from every ſingle Tree. But becauſe that Number may be thought too great to be depended upon, let us take only half, and ſuppoſe every Peach-Tree to bear fifty fine large Peaches. An ample annual Reward for Care and Diligence! Now in both Schemes I have allotted Seven Peaches on the beſt Walls, the Product whereof at a moderate Computation, will be 350 of the beſt and largeſt Fruit, which ordinarily ſucceeding one another in their ripening, even on the ſame Tree, will afford a regular and daily Gratification to the Taſte in this one Article of the Fruit-Garden: But leſt even this Abundance ſhould not be thought ſufficient, more Peach-Trees may be ſet in the Room of the two Vines in the one Plot, and the Winter Bon Crêtien and the La Chaſſere in the other; becauſe there are other Places

may

may be found for *them*, as I ſhall obſerve preſently. And indeed I placed *them* there, rather with a View of their being removed, as Occaſion might require, or as Sickneſs and Mortality in other Parts may make neceſſary for a preſent Supply of more Peaches.

Let us next conſider the Apricot; which, whatſoever Monſieur *Quinteney* is pleaſed to ſay of it, as if 'twas fit only for Compotes, is really a good and much valued Fruit in *England*. I mean not the early Maſculine Apricot, which is indeed worth nothing; but the large Turky Apricot, which hath a noble Flavour, and is a conſtant Bearer. If therefore in the one Plot I have allowed only *three*, becauſe a *South-weſt* Wall is rather too good, and in the other *five*, as a ſufficient Supply, it is not becauſe I deſpiſe it, but becauſe I know *five* ſuch Trees will ordinarily bear an incredible Quantity of Fruit, if they be

be managed as they ought. I have now two Apricot-Trees, that have been several Years in their Prosperity and at full Growth, and I cannot say that in all that time I can remember a Year, when they have afforded me less than a Bushel of Fruit. And alas! my Soil and Situation will not give me leave to boast of any Security from Blasts, Canker, *&c.*

It will not sure be thought too great a Complement, that I allow Room on the best Walls for four or five of the best *French* Pears, which are so little inferior to any of the Stone Fruit, and yet come to their Maturity when the other are gone, which is no inconsiderable Recommendation. And on the other side, it ought not to be wondered at by those that admire them, that I allow so few; because with good Management each Pear-Tree will ordinarily bear no less than half a Bushel, as I have had long Experience; indeed not seldom

as

as much more. However there is ſo ample a Proviſion made of excellent ſorts among the Dwarfs, that there can never be found any Deficiency of good Pears in this Plan.

I have allowed Room for ſome of the beſt Plums on the *Eaſt*, *Weſt*, and *South-Weſt* Walls; becauſe I think they very much deſerve it, eſpecially the two Perdrigans and the Roch Corbon. They will by no means do well *without* a pretty good Wall; but *with* that Aſſiſtance they are incomparable Fruits, and have a noble vinous Flavour, ſuch as muſt be agreeable to every one that has not an Averſion to a Plum, or will not always think it a *peaſantly* Fruit.

Upon the whole, here is a ſquare Plat of Ground ſet out and walled round, ſuppoſed to be only 40 Yards ſquare, which, at 4 Yards diſtance for every Tree, will afford 40 Trees, every ſeveral ſort ſuitable to its ſeveral Aſpect to the Sun; which, with good

good and skilful Management, may reasonably be supposed to afford every Year a sufficient Variety, as well as Quantity of the best Fruits; If we take in what I am going next to speak to, *viz.* that great additional Help of the Dwarfs in the middle.

Which Dwarfs I make to consist only of Three sorts of Fruit, as most proper for our present Scheme, *viz.* Pears, Plums and Cherries, leaving even the best Apples to their more proper Place in the Orchard: except the eight Non-Parelles on Paradise Stocks, which may be observed to be set in the intermediate Spaces on the 4 sides, where, never growing above a Foot high, they will have room enough.

Now one side of the Square may be observed to contain no less than 28 Dwarf Pears: allowing every Tree four Yards square for its horizontal Branches to spread in, which is very sufficient, supposing the Place not to be crouded

crouded with any thing else; no not with Flowers or Legumes, which is what I always take for granted. If then every single Tree doth but in any sort answer the Proportion of Fruit, which my own Experience hath furnished we withal, here will be greater Plenty and Abundance than can well be disposed of. I have only one Dwarf of the Swan's Egg Pear, which is indeed (as I have termed it) a *Nulli secundum*, and, if my Memory fail not, hath for these last five or six Years afforded me no less than two Bushels; Nay, this last Year I had betwixt three and four Bushels from it, most of them excellently good. However, because this may seem something extravagant, and more than can ordinarily be expected, let us suppose every Dwarf-Pear to afford only half a Bushel apiece one with another, the Product of Twenty eight Trees, on one side of the Square only, will be Fourteen Bushels of the best Summer and Autumn Pears of five or six sorts.

The

The other ſide of the Square is filled with the beſt Plums and Cherries, at leaſt the beſt of thoſe ſorts, that will do without the Help of a Wall, 28 alſo in Number; which, with tolerable Management, and a reaſonable Allowance for Quantity, will make an abundant Proviſion for the Table, throughout the whole Seaſon of Cherries and Plums. Only it may not be amiſs here to obſerve, that it will be very proper to ſuffer the one half of the Dwarf-Trees to grow higher than ordinary: That is to ſay, all thoſe ſeveral Trees in both Squares, that are planted neareſt to the *North*, *North-Eaſt*, and *North-Weſt* Walls, may be ſuffered to be what we call *Half Dwarfs*, where their taller Heads will not do any harm by overſhadowing any of the beſt Walls. And indeed the Half Dwarfs, where they can be ſuffered, are the moſt conſtant Bearers with the leaſt Trouble and greateſt Plenty; the

the other requiring a very vigilant Eye to correct Luxuriancy, and seasonably to remove all perpendicular and useless Branches. This indeed must be done in the Half Dwarfs, as well as the other; but the Confusion that a vigorous Tree makes is much greater in the low Dwarfs, and so the proper Remedies must be oftener apply'd. Besides, I have observed, that none of the sorts of Plums and Cherries especially, will well endure *violent Corrections: Unmerciful* Loppings is a sort of *Persecution* to them, and they answer the End of their Nature much better under a *moderate* and *gentle* Government.

By this time I suppose it will be thought by many, that I have forgot two or three considerable Articles in a Fruit-Garden, and have made no Provision for them in the present Scheme, *viz.* Vines, French Winter-Pears, and Figs: But indeed *these* I have with Design left out of the Plan, and reser-

ved them for more proper and convenient Places. All the Southern Aſpects of the Dwelling-Houſe, Stables, and other Out-Houſes, which every Gentleman's Seat is plentifully furniſhed with, will do ſingularly well for theſe. For all the ſeveral ſorts of Bon Crêtiens, the Summer, Autumn and Winter, *&c.* require more than ordinary Height and Room to ſpread in; and here they may be allowed *Elbow-room* and *Height* enough to anſwer the End of bearing *much* Fruit; tho' if the Soil be any thing inclinable to too much wet or a cold Clay, it muſt not be expected to be *good* Fruit: And therefore in ſuch Caſes, it is adviſeable, rather to be contented with ſuch as will do well enough; as the Winter-Thorne, Amadot, Virgulee, or La Chaſſere, which are excellent in their Kind. However, I ought to ſay here that if the Soil be warm and ſuitable to the ſeveral Bon Crêtiens; yet they produce

produce much better and larger Fruit on a Quince than on a Free Stock; which perhaps is peculiar to this ſort of Pear: tho' it muſt not be expected ſuch Trees ſhould be very long-lived.

The ſeveral ſorts of Grapes are alſo reſerved and allotted for the Southern Aſpects of Buildings near the Houſe, where they may have room to ſpread themſelves, and will ſoon cover ſuch Walls with Plenty of Fruit. Not that the Vine doth really need (as is commonly thought) any ſuch great Height to make it produce Fruit; but that it will *ſooner* and *better* cover ſuch *tall* Walls as are a natural Security of the Fruit againſt *ordinary* Endeavours to taſte it.

As for Figs in the laſt Place, which I have reſerved for Walls that lie open to Comers and Goers, they will do ſingularly well there. For tho' both the blue and the white ſort are the richeſt and nobleſt Fruit a Garden

affords, yet it seldome strikes the Fancy or suits the Palate of the meaner sort; insomuch that there is little danger of being deprived of this Delicacy by any rapacious Hand. And indeed it is for this reason also, that I advise the planting the best of the Winter-Pears in such expos'd Places; because whilst they are growing on the Tree, they are in no great danger of being tasted a second time.

Thus I conceive we have effectually found what we were in Quest of, *Multum in Parvo*; which I always suppose to be a very acceptable Thing; to such wise Men especially, as have learn'd the *divine Art* of dedicating the Overplus of their Time and Estate to God.

What some modern Authors mean by putting Gentlemen upon Grand Designs, and vilifying all others as *crimping*, *diminutive*, and *wretched Performances*, I could never understand. I believe it will be found that

nothing

nothing hath more tended to the Ruin of brave Eſtates, than theſe *prolated Gardens*, as they call them, and a fond Affectation of imitating a vain People in what they call *La Grand Manier*. Our Engliſh Gentlemen have always been famous for more ſubſtantial Realities, without ſeparating the *Jucundum* from the *Utile*; and can reliſh a profitable Deſign, tho' it doth not reſemble *Ingentia Rura*. If Gardens are only to be valued for their largeneſs, there will be no end of multiplying the Number of Acres, till Gentlemen have got to the End of their Eſtates: So that I cannot but think, there muſt be great Defect in the Contrivance, if a very beautiful and magnificent Garden of Pleaſure and Profit too, be not formed out of a very few Acres. I am pleaſed however to think *Horace*'s Wiſh agrees ſo well with my preſent Scheme,

Hoc erat in Votis; Modus agri non
ita magnus
Hortus ubi,--------

and that I have reduced the Fruit-Garden to leſs than half an Acre, ſufficient to furniſh any Gentleman's Table with all the Variety of good Fruits in their ſeveral Seaſons. This ought to be the more acceptable, in that it is propoſed as a Remedy to cure Barrenneſs proceeding from too great a Compaſs of Ground and too many Trees; which, as far as my Obſervation has gone, do generally ſerve to enhance the Charge and leſſen the Profit. For what an entertaining and comfortable Viſit may we ſuppoſe a Gentleman every Day to make to this little Garden; where he will find himſelf encompaſſed and ſurrounded with Plenty, and may behold a charming Variety of what is moſt pleaſing to the Eye and Taſte, at once the

Reward

Red Bon: magnū. Roch Corbon. Queen Mother. Ruſſelet. Cuiſſe Madam. Buree. 2 Aprecots.

A full East Wall 32 Yards long.

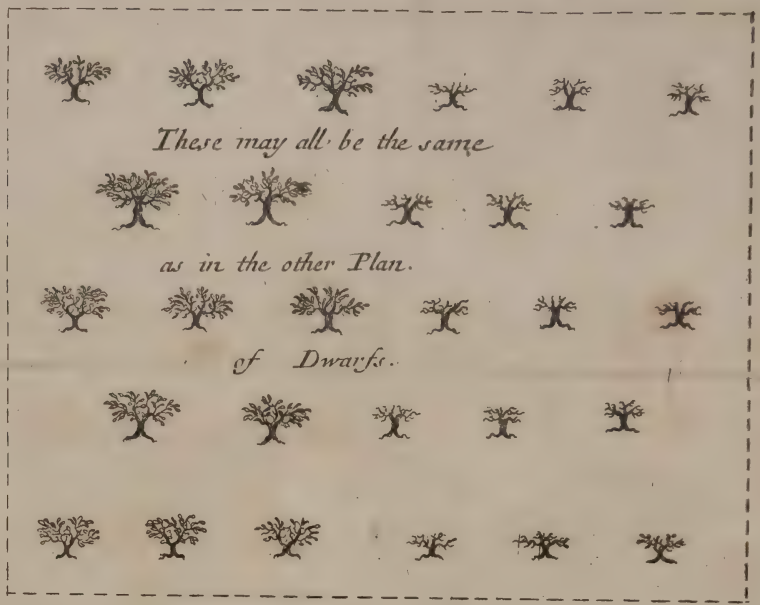
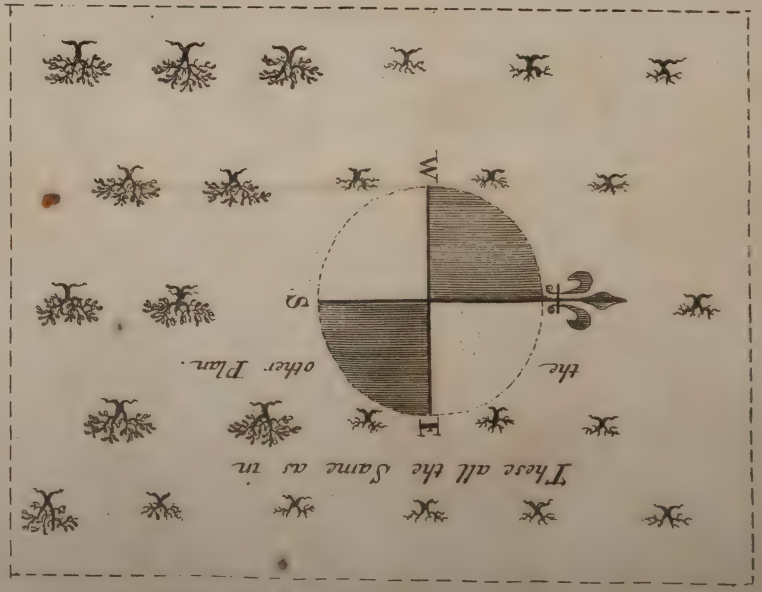


Fig. 1.



A full West Wall 32 Yards long

3 Morella Cherrys. 2 Muſcle plums. two White Bonū mag. 2 Pound peirs. 1 Damaſcene 2 black P Worcest.

Colmar. Wint. B. Crétien. Buree. La Chaſſere. Ch. Newingt. Admirable. W. Magdalen. Nivet. Chevreuse. Royal Peach. R. Nectarin. Duke Cherry

A Direct South Wall 48 Yards long.

3 Orange Aprecots. Blue Perdrigan. W. Perdrig. Drab d'Or. Fotheringa. Muſcle.

Buree. Verte longue. St Germain Ambret. O. Newington Peaches 2. Roman Nectarines 2. Minion P. Admirable. Vine. Red Magdalen or peach

A South-East Wall 48 Yards long

A North-East Wall 32 Yards long

May Duke Cherrys six.

Bleeding Hearts five.

Orleance plums six.

3 Violet Plums.

2 Damascenes.

3 Bonum magnum Plums

3 Muscle plums.

Non parelle Non parelle Non parelle Non parelle

A South-West Wall 32 Yards long

Vine. Colmar P. Apricot. Apricot. Apricot. Blue Perdrigan. W. Perdrigan. Roch Corbon or peach

8 Non Pareles on Paradise stocks.

Swans Egg Pears six.

Largonel Pears five.

Bergamot Pears six.

Buree Pears five.

Russelet Pears three.

Orange Bergamot three.

Non parelle Non parelle

Fig. 2.

A North-West Wall 48 yards long

six Morella Cherrys. two Queen Mother Plums. 1 Pound pear. 1 Russelet 2 Tetheringa plums.

2 Orleans plums. Muscle. R. bonii Magni. 2 White bonii mag. 2 May duke Cherrys.

Reward of his Care and Diligence, and the Fruit even of his Recreation.

I ſuppoſe I need not add any thing farther on this Head, the two different Plans I have hereto annex'd, the one exactly according to, the other croſſing the Quarters, will make every thing eaſy and plain *. And the Moral of the whole I ſhould think is not leſs plain. For if our innocent *Recreations* are thus ſurprizingly rewarded with Pleaſure and Profit, how can an ingenuous Mind forbear thankfully to adore the God of Nature for temporal Bleſſings, and more chearfully to expect a greater Reward in the next World for ſuch *Virtues*, as lay a Foundation for it in this?

Fig. 1. and *Fig.* 2.

A Third General CAUSE *of* BARRENNESS,

IS an unskilful Ordering and bad Management of Fruit-Trees, both in their *Planting* and *Pruning*. The Case is much the same here in the *vegetable* as it is in the *moral* World. Every one knows how fatally Youth is commonly enslaved to bad Courses, for want of setting out right at first, and being well instructed and seasoned with virtuous Principles. Corrupt Nature will soon over-bear the *weak* and *tender* Dispositions to Goodness in Youth, without an early Care and wise Government: By the Help whereof head-strong Passions are subdued, and all the wild Sallies of a vicious Inclination are kept within due Bounds? And so by the Blessing of God, the Man thereby becomes fruitful in good Works, and useful in his Generation.

So

So alſo here in the *vegetable* World; it is of great Conſequence to the Goodneſs and Proſperity of a Fruit-Tree, that it be rightly managed and kept in due Order from the beginning; that the extravagant Growth of Nature, and its Tendency to Wood and *fruitleſs* Branches, may be kept under and ſubdued in time, before it become too head-ſtrong and ungovernable: by which means the *weak* and *tender* Shoots will begin more and more to diſcover themſelves, as the joyful Appearances of Fruit and Plenty. An Error and Miſtake in the beginning proves often fatal, and is not ſo eaſily rectified afterward, without great and too dangerous Violences. But let us examine this Matter a little more particularly, that we may the better know how to apply the proper Remedy.

As one Cauſe of Barrenneſs, I have here taken Notice of a common Defect in the Management of Fruit-Trees;

Trees; both in *planting* and *pruning* them. To ſpeak a little methodically,

Firſt, A wrong Method of *planting* is a very untoward Beginning, and proves oftentimes of very ill Conſequence, with reſpect to future Hopes of any great Plenty. And yet there are theſe three ſeveral ways of *planting* too often practiſed, which ſeem to me to be contrary to the Rules of Art, as well as Nature; *viz.* Planting Trees too deep; too near one another; and againſt a wrong Expoſition.

(1.) There is no one Miſtake in the Art of Gardening, that I have obſerved to be more general and common than this, of planting Fruit-Trees too deep in the Ground; and yet nothing is more fatal to them, eſpecially in ſome Grounds too much ſubject to Moiſture in the Winter, and nothing tends more to keep Trees in a ſickly, unthriving Condition, and conſequently from bearing either *much* or

good

good Fruit. Indeed where the Soil is naturally exceeding dry, and lies on a Declivity that will quickly carry off the Winter-Wets, the Fault may be leſs dangerous: But except there be a ſufficient Depth of natural good Earth above the Rock or Gravel, the Evil complained of will there quickly diſcover itſelf, after four or five Years, when the Roots of the Tree will be ſtarved by a hungry Gravel, Sand, Chalk, or Rock, or whatſoever the Bottom be, that lies too near the Surface. On all Accounts therefore it is much the better and ſafer way to plant *high*, provided Care be but taken the firſt and ſecond Year, to keep the Roots tolerably cool and moiſt; for which I have already given Directions in my former Treatiſe *. To which and what I have there ſaid about Planting, I ſhall only add here on this Head: That becauſe I am

* *Pag.* 14. *Edit.* 1.

well

well assured, nothing is more fatal to Fruit-Trees, the tenderer sort especially, than planting them too deep, and thereby subjecting their Roots to too much Wet in the Winter; (for Summer-Wets never hurt them) I cannot but advise to let the top Surface of the Borders under the Walls be at least seven or eight Inches above the common Level; setting that part of the Tree, where it begins to root and divide its Spurs, exactly even with the upper Surface of the Border. Only still it must be observed (as I have elsewhere directed*) that there must be added another Semicircle of good Earth or rich Sand of about three or four Inches deep round the Tree, paved with small Pebbles, to keep it cool and moist for the two first Years. If this Method is carefully put in practice, there will be no need of mending the Borders above one Foot deep;

* *Pag.* 15. former *Treatise.*

no

no matter how wide, to encourage the Roots to ſpread horizontally. I cannot but here repeat, and earneſtly recommend the making uſe of the beſt *untry'd Earth* that can be got, for filling up the Trenches, both for Wall-Trees and Dwarfs; having had long Experience that no ſort of Compoſition made with Coſt and Art, can exceed the Riches of this Earth, or will make more vigorous, healthful and laſting Trees*. But,

(2). There is another common Miſtake committed in planting, which is attended with very unhappy Conſequences, and that is planting the Trees too near one another; the Miſchief whereof is very manifeſt theſe two ways: Firſt, after 5 or 6 Years, they begin to crowd and ſhoulder one another, and for want of room the Gardener is tempted to run the Branches perpendicularly, which is the

* See more of this Pag. 5. Part 1.

high

high Road to Ruin; at leaſt it is the way to increaſe the Wood, and leſſen the Quantity of Fruit; for the bottom and middle Part of the Tree will quickly be found to be altogether barren; and in the Peach and Apricot the Evil will be abſolutely irrecoverable; *they* not putting out young Shoots, when the great Wood is cut out, by reaſon of the Thickneſs of their Bark. Whereas when Trees are kept thin of Wood in the middle, and have room to ſpread their horizontal Branches, every Part of a Tree may with Care be kept in a bearing State. But beſides, there is another Miſchief attends this Miſtake of planting too near; which is, that the Roots of the Trees will quickly meet, and ſo rob one another of the proper Nouriſhment they ſhould receive, and when once the Borders begin to be worn out, and loſe their Richneſs and Fertility, *that* is never to be recovered, but by taking away the Tree, putting

in new Earth, and planting another. Whereas when Trees are planted at their due Distances, their Roots do still receive new Succour and fresh Nourishment, as they advance, and as the Head of the Tree increaseth to require it; whereby an agreeable Health and Vigour is retained a long time even for 20 or 30 Years. Now, though Pears may ordinarily require something more, especially if they be upon free Stocks; yet I have assigned only four Yards, as a mean distance proper only for Fruit-Trees, either for the Wall or Dwarfs. *More* Room would generally leave too great Vacancies in the Wall, and *less* would subject the Trees to the Evil here complained of. In my former * Treatise I have indeed recommended the planting tall Trees in the intermediate Spaces: But this I suppose to be done with great Discretion, chiefly

* Pag. 16.

betwixt

betwixt Pears whoſe Strength and Vigour are not ſo eaſily impaired; or if they are placed between other Trees, they are ſuppoſed to ſtand only 2 or 3 Years at moſt, and then to be removed into the Orchard for Standards.

For the very ſame Reaſon that I diſallow of Trees ſtanding too near together, that the Riches of the Borders be not wore out, I alſo by no means approve of a bad Practice in ſome Gardens, of letting Roſemary, Lavender, Stock-Gilliflowers and Iris's, *&c.* grow on the Borders, where the choiceſt Fruit-Trees are, which yet in a little time will not fail to impoveriſh the Ground, and give the Trees, if they be young, occaſion to *complain*, by making only weak and languiſhing Shoots. But then again,

Laſtly, There is yet another great Miſtake, that I find very frequently committed in the planting a Fruit-Garden;

Garden; and that is, putting Trees on a wrong Expoſition, which muſt be owing to Ignorance, either of the Nature and Quality of the Tree, or of the true Diſpoſition of the Ground and its exact bearing to the Sun. The Ignorance of either one or t'other, or both, muſt needs be of bad Conſequence, and prove a great Diſappointment to the Planter; who it may be for want of being rightly informed, has put a Vine, an Apricot, or a Peach on a *North-Eaſt* or a *North-Weſt* Wall, and it may be has been ſo unfortunate, as to put a mealy Summer Pear, or an indifferent Plum againſt a *South Eaſt* or a *South-Weſt* Wall. This is no airy Suppoſition; for I have very often my ſelf found it ſo, and complained of it with ſome Uneaſineſs. It is a very common Practice with ſome to thruſt many of the beſt ſorts of French Pears, the Buree, the Verte-longue, the Virgulee into any Corner of a *North-Eaſt*

or *North-West* Wall; or if the Wall faces any Point of the *South*, it shall be shaded by some neighbouring Wall or Building for 3 or 4 Hours; insomuch that if the Trees do bear any Fruit, it will prove small, wat'ry and insipid; the general Consequence of which is, that the sort of Fruit shall be exclaimed against and condemned, without having had proper Justice done to it.

Indeed it is not seldom that Apricots and Peaches and Vines are *supposed* to be set against *East* and *West* Walls; when upon Examination the Exposition is found to bear several Degrees towards the *North*: In which Case the Disappointment must be very great, when after several Years waiting, the Trees are found to bear little else but Leaves, or small insipid Fruit? For indeed no other can well be expected from such an Exposition, as declines any thing to the *North*; except in a more than ordinary hot

Summer

Summer and Soil, or with the Help and Advantage of some artificial Heat, as the back of a Kitchen Chimney, or the like.

To prevent therefore the inconvenience of this Mistake, it is very adviseable when a Fruit-Garden is once pitch'd upon, and the Walls built, to know by an exact Meridian Line, the proper Bearings of each Wall, before they are Planted; and their true Declinations. Now tho' there are several easy ways of doing this, yet because every Gentleman may not happen to be acquainted with them, and to make this Treatise as useful to the Publick as I can, I have inserted the following short and easy Method of finding an exact Meridian Line.

Take a Stone of about 18 or 20 Inches square made exactly plain and smooth. Bore a hole near one of the Corners, wherein fix an Iron Pin about 14 Inches long *clear*, drawn to a Point on the top: No matter whe-

ther it be exactly perpendicular. Place this Stone in ſome open Part of the Garden exactly horizontal by a Level, that Corner where the Pin ſtands and its Oppoſite bearing as near as you can gueſs, *North* and *South*, the Pin on the *South*. This done, about 9 a Clock in a clear Day, draw a Semicircle from the extreme Point of the Shadow of the Pin, which may be done with a ſteady Hand by the help of a narrow thin piece of Fir, made ſharp at one end with the Point of a Nail, fixing the flat ſide on the top of the Pin; ſo that the Point of the Nail may juſt reach the extreme Part of the Shadow, where you are to make a Point or Mark. Then at about 3 a Clock the ſame Day, obſerve exactly when the Shadow of the Pin comes again to the Semicircle; from which Moment allow one Minute for the Sun's annual Motion, and then make a Mark exactly at the Extremity of the Shadow, which will be

be ſomething beyond the Semicircle. Draw a Line ſtrait from one Point to the other, and then *half* it exactly; and from this middle Point raiſe a Perpendicular which will be the exact Meridian Line.

N. B. It is convenient to make 3 or 4 of theſe Semicircles both before and after 9 a Clock, for fear the Sun prove in a Cloud, when the Obſervation is to be made in the Afternoon; and then if one miſs, the other may hit. Only great Care muſt be taken that the correſponding Points in the *ſame* Circle be made uſe of, that there be no Miſtake. It is alſo proper to do this in the Summer Quarter, when the Pen-Umbra of the Shadow's Point is leaſt, and the *exact* Point may be beſt taken and more nicely obſerved.

N. B. This exact Meridian may with eaſe be transferred to any other more convenient Place about the Houſe; as the upright Stanchel of a Window or any perpendicular

Transome or Jaume, shadowing on the Floor or Window Board; this Meridian being of singular use throughout the whole Year for regulating Clocks and Dials, and taking Declinations. Which last Operation being to our present Purpose, may be very readily performed by only applying the side of the Quadrant to the Wall, and then holding up a Plum-Line exactly at 12; whose Shadow may pass thro' the Centre, and will at the same time give the Degrees of Declination on the Rim of the Quadrant; only a Western Declination must be counted *forwards* from left-Hand to right, and an Eastern *backwards* from right-Hand to left, on the Edge of the Quadrant, as the ingenious Inquirer will soon observe.

As to the Mistake of planting Trees on a wrong Exposition for want of knowing the proper Aspect every Tree requires; to remedy this I was once thinking to insert a Catalogue of all the

the moſt known Fruits, with their ſuitable Aſpects over againſt them, as alſo which are propereſt for Walls, and which for Dwarfs; but that I conſider'd I have already effectually done this in the very Plan I have given above*; where at one View may be ſeen what I have judg'd proper for that very Purpoſe with reſpect to all the beſt and moſt approv'd ſorts of Fruit; and the kind Reader will, I know, excuſe me from all needleſs Repetitions.

Secondly, I come now according to my Method, to take Notice of ſome common Miſtakes in the *pruning* of Fruit-Trees, which I ſuppoſe to be a great Cauſe of their Barrenneſs. But before I enter upon this difficult Point, I muſt be forced to ſay ſomething to rectify a common Miſtake, even in one of the firſt Things a Gardener takes in hand, and that is his *Pruning*

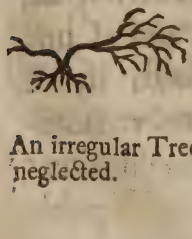
* Fig. 1. and 2.

Knife; the true Make and Shape whereof I venture to affirm, with due Respect to the Judgment of preceding Ages, hath hitherto been quite mistaken. For the Blade of a common pruning Knife is known to be shaped and fashioned like a Hawk's Bill; and yet according to the Observations I have made of the real use of a pruning Knife, this is quite wrong and unnatural. If indeed the Branches of a Fruit-Tree against a Wall grew generally *downwards*, this kind of Shape might be of some use for the cutting off some of the stronger Branches; but as they generally grow *upwards* and *side-ways*, such a shaped Knife becomes almost of no use; at least it must be used very aukwardly.

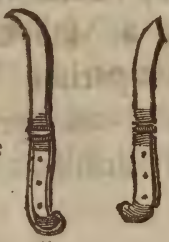
Besides, in all Cases that require much Strength, a Mallet and Chisel are without Comparison best, safest, and most exact; and in other Cases also too stubborn for the Knife alone, a Stroke of the Hammer on the back

of

of my Knife anſwers the Purpoſe to great Nicety and Exactneſs. But the moſt general Uſe of a Knife, is to ſhorten all the leſſer Branches that grow upwards and ſideways; to perform which, a Hawk's Bill is the moſt aukward Shape in the World: And therefore the Shape of the Knife which I always uſe and recommend to my Friends, is juſt the Reverſe of *that*, a little ſloping off, and round towards the Point: And how much more natural and uſeful ſuch a ſhaped Knife is like to prove to one that uſes it on upright and horizontal Branches, and *that* generally above Head, I leave to the Judgment of the ingenious Practitioner; only giving him here the Figure of both, the better to direct his Choice.



An irregular Tree neglected.



The ſame irregular Tree reduced in Time.

But

But it may not be amiss to add here, that such a Knife ought to be made with a good thick Back, the better to bear the Stroke of a Hammer upon occasion, and if possible of Razor-Mettal well tempered, that it may always have a good Edge, and be used as a Penknife, as well as for Pruning.

Having now settled this Point, the first Mistake in Pruning that I observe is, letting a Tree from the beginning run out into vigorous Wood and Branches all on one side; and because the Shoots on the other side are weak and unthriving by reason of Blast or Canker, the other are wont to be continued, and the Trees suffered to grow in a very irregular and unhandsome Fashion; whereby it comes to pass, that a great Part of the Wall is unfurnished with Branches, and by a continued Neglect, the proper Beauty and desired Fruitfulness is not capable

pable of being reſtored, but by planting a new Tree. Whereas had this Evil been obſerved and remedied in time, *all* might eaſily have been reduced into the greateſt Beauty and Order imaginable; as may be ſeen by the two foregoing Figures. For when Branches are young and tender, they are *ductile* and *governable*, and you may with Care *lead* them backwards and forwards, as Occaſion and Neceſſity require. Neither is this Method any the leaſt Blemiſh or Hindrance to the future Proſperity and Fruitfulneſs of the Tree, but rather a Furtherance by reaſon of that early Check it received in its moſt vigorous Part, which (as I have elſewhere obſerved) throws it ſooner into a bearing State. And it is alſo to be obſerved, that ſuch a Check does not in the leaſt hinder its Proſperity: For there is this difference between a weak ſickly Branch, and a vigorous Branch made

made weaker, rectified and subdued by Art: The one is in a dangerous dying Condition, for want of proper Wood and Pores to convey the Sap and Juices in their continued Circulation *; the other has its Ducts and Passages only a little straitened, by being horizontally bent and bow'd down; lest it spend its Vigour all at once, and die the sooner afterwards. In short, the one is dying and generally past Recovery; the other would

* What I have said in my former Treatise (Pag. 64.) amounts to a plain Demonstration of the Circulation of the Sap in the Jessamine, tinged all over by Inoculation. For tho' (as hath been objected) that Operation hath not the same Effect in the painted Philerea and Holley; and tho' we could not account for the Reason of such a different Phænomenon; yet still the Proof is undeniable in the Jessamine. But indeed the true Reason of that Difference seems to be plainly this; The Bark and Leaves of those Ever-Greens are so tough, hard and stubborn, that they do not easily suffer any adventitious Juice to alter their natural Colour; and we find some sorts of them will hardly retain the Stripe, made even from the Shoots of the Bud itself. Whereas the Jessamine hath a marvellous thin Bark and silky Leaves, which easily receive an Impression and Change of Colour from a ting'd or poison'd Sap, continually circulating through their Veins or Pores.

live too fast, if not kept within due Bounds and wholsome Rules, which give true Life to the *vegetable*, as well as the *moral* World. This Reduction of a young Tree, which I am speaking of, chiefly respects the Peach and Apricot; no other Tree that I know of being so subject to decay by Blast and Canker on one side and not on the other. And now I have mentioned *them*, before I leave them, I shall take notice of a Defect in Pruning, more peculiarly prejudicial to these, than to any other sorts of Fruit-Trees; and that is, leaving the Wood-branches of the aforegoing Year too long. This, tho' it is a general Fault in Pruning; yet it is of worse Consequence in the Peach and Apricot, their Bark, after two or three Years, growing so thick and tough, that they will not put forth new and tender Shoots any more after they are shortened, as the Pear and Plumb will do; which is the true Reason of that

that Barrenness so frequently visible in Peach-Trees toward the bottom, having been suffer'd to grow too fast, and run into long Wood-branches in their Youth. I am sensible several Persons are very regardless of this; especially such as are blessed with a more than ordinary warm good Soil; and are apt to triumph with their Plenty, without minding the strict Rules of Art, or, it may be, attribute their Success to their own particular Skill. Whereas Nature itself, with little Art in such Soils, will do Wonders for a time: But then they must remember, that their Trees will be shorter-liv'd: And accordingly in such Cases, as I have observed, great Barrenness in time will be discovered in the middle and bottom of the Walls, as a Fore-runner of Death. It is a certain Truth, *good pruning* not only procures *Fruit*, but makes *lasting Trees*.

Having

Having given this Caution, I need not add any thing farther concerning Rules for the Government of the Peach and Apricot, if what I have already ſaid in my former Treatiſe, be but well minded and conſidered. Only before I leave this Head, I have ſomething particular to ſay with reſpect to the Government of the Pear and Plum, both thoſe againſt the Wall and Dwarfs, which will in a great meaſure cure the Defect of bad pruning in old Trees, and prevent the Danger of Barrenneſs in young ones, ariſing from too great a Degree of Vigour, which theſe Trees are moſt ſubject to.

For *Firſt*; As to the Caſe of a young Tree, that diſcovers an extraordinary Vigour after planting, nothing ſo effectually brings it into a bearing State, as ſome way or other checking the Sap in its free Circulation, either in the Root or Branches. Now tho' I have ſometimes practiſed

this

this with Succeſs on the Roots, by ſhortning ſeveral of them with a ſharp Spade; yet becauſe this working *under Ground* is a blind and uncertain Remedy, I rather prefer practiſing upon the Branches with my Knife; where I can ſee what I do, and make a Wound as little and as big as I pleaſe: In the Caſe therefore here ſuppoſed, I cut the moſt vigorous Shoots two parts in three through, with a pretty large Notch, leſt it heal over again too ſoon, and recover an undeſirable Vigour. Beſide the Advantage of bringing a Tree ſooner to a bearing State, there is this farther Benefit to be had by this Method, *viz.* you may lay all *untoward* Branches juſt as you pleaſe, humouring the Notch ſo, that the Branch may fall handſomely into the Place deſired; ſo likewiſe all perpendicular Branches, and all ſuch as grow forward, may, if occaſion be, eaſily be reduced horizontally, and nailed cloſe to the Wall in a void

Place

Place where they are wanted; and if it is a Dwarf, this *Inciſion* is of ſingular uſe to rectify *aſpiring* Nature, to keep down all perpendicular Branches, and to give the Tree its exact open Air, and that proper Beauty and Form, which a Dwarf requires. There need not be much fear of making the Wound too big; for provided there be but any little reaſonable Quantity of the outward Bark or Rind left uncut, a Branch of a *Pear eſpecially* cannot ordinarily be killed, but will ſoon, *too ſoon* recover its Vigour. Only with reſpect to Dwarfs it muſt be obſerved, that where the Inciſion is made pretty large, and the Branch much weakened, it is very convenient to ſtrengthen it for a time by a Prop, againſt the Violence of Winds; till the Wound is a little healed over, and it recover a ſufficient Strength to ſupport itſelf; which yet it will be obſerved to do in one Summer.

Secondly, When the Pear and Plum have been ſuffered ſeveral Years to run into Wood and many thick perpendicular Branches, (the Effect of bad Pruning and the certain Cauſe of Barrenneſs) after ſome of the biggeſt Wood is intirely cut out, the beſt Remedy that I could ever yet find, is to make theſe *Inciſions* with a Mallet and Chiſel, on ſome of the largeſt and moſt upright Branches that are left; ſometimes *two* or *more* even in the ſame Branch. This I have often experienced to produce Plenty, ſometimes the firſt Year, but moſt commonly the ſecond after the Operation. But indeed it is not always a Sign of bad Pruning, if vigorous Trees need ſuch Checks as theſe; for the Pear on a free Stock is hardly to be kept within Bounds, or pruned with any conſtant Succeſs *without* them: But *with* theſe Helps and a due Regard to the Rules of Pruning, which I have already laid down (Part 1.) there is little danger

of

of wanting a Crop almoſt every Year; eſpecially if what I have obſerved to be much wanted in theſe vigorous Trees, be but minded and practiſed: *viz.* never to let the Branches ſtand *too forward* with knotty Wood; but either to cut them quite off within half an Inch of the great Wood-branches, or elſe, as occaſion ſerves, to *plaſh* them by *Inciſion* as before, or rather *break* them with the Hand half through; by which means they become Fruit-bearing Wood, and you fill the Vacancies of the Wall, bending them, as you pleaſe, from the Place where they were cut or broken.

I have frequently practiſed this with Succeſs on the young Wood-branches, even of the Peach and Apricot, when they have happened to form themſelves direct forward, or toward ſuch Places where they were leaſt wanted. And theſe Branches thus wounded have continued ſeveral Years bearing Fruit. But yet becauſe

they will often die with Gum, this must not be made a common Practice of, and ought only to be used in those Cases, where their dying is only the Loss of such Shoots, as would otherwise have been of no use. But the Pear and Plum are of so strong and hardy a Nature, that you cannot ordinarily hurt them by *Incision* or any *moderate* breaking of their Branches. I know not whether I need to add, that the Vine and Fig will by no means endure such course Treatment, the ingenious Observer well considering, that *Discipline* is always to be suited and proportioned to the *Strength* or *Weakness* of Nature.

N. B. Although this Operation of managing young vigorous Branches by *Breaking*, and the larger ones by *Plashing* or *Incision*, be to be practised any time of the Year; yet I prefer doing it in the Spring, especially making the larger Wounds, on the Account of the Winter Wets and Frosts,

Frosts, which will then be over; tho' any danger from thence may easily be prevented, by only applying a little Cow-dung to the Wound. As to the *general* Practice, a watchful Eye will see Cause to use this Method, not only in the Winter, but all the Summer Season too, as Occasion and Necessity require.

N. B. A dry Summer naturally disposeth almost all Trees to bear well the following Year; therefore in a wet Summer, Fruit-Trees require more than ordinary Care and Art, to hinder their running into Wood and fruitless luxuriant Branches.

N. B. The Art of checking the Sap both in Root and Branches, may be very successfully apply'd to such flat Dwarfs, as are intended to be only about two Feet high, humouring the Borders, whether they be Apples, Plums or Pears: tho' it is most proper the Apples should be on Paradise-Stocks, and the Pears on Quinces, the more

naturally to anſwer the Purpoſe of having leſs Wood, and a ſufficient Quantity of Fruit. For indeed the true Art and Myſtery of making a Tree bear Fruit, is only to Proportion the *Degree* of Sap and Vigour to the *Quantity* of Wood or Branches. When that Matter is once rightly adjuſted, you have every thing that Beauty and Proſperity can give. So when a Tree wants Sap and Vigour, it languiſhes and dies; and when it has too much, it runs into Wood and fruitleſs Branches. How well this Proportion may be kept with reſpect to Fruit-Trees ſet in Pots, I am not as yet able to ſay; becauſe I am but *now* making the Experiment of a Peach, an Apricot, a Fig, and a Cherry ſo ordered. There *can* be no danger of too much Vigour; all the Difficulty will be to give them *Moiſture* and *Nouriſhment* enough in ſo ſmall a Compaſs of Earth, and to preſerve their Bloſſoms from Blaſts and Froſts; which yet I hope

to

to overcome, by *Housing* them a Nights in the Spring, and setting them pretty deep in the Ground in the Summer, on a good Exposition, allowing them plentiful Wat'rings.

But the Success of this being uncertain, I shall say no more of it; but shall leave this, and what else I have said on this Head to the Judgment of all ingenious Improvers of Art and Nature; whose modest Enquiries ought the rather to be encouraged by all wise and good Men; because the more we search, the more we still discover of the divine Bounty and Goodness to Mankind.

The Fourth and last General CAUSE *of* BARRENNESS.

THere remains in the last Place to say something of a very different Cause of Unfruitfulness from any that have hitherto been taken notice of; and that is *cold unkind*

Seasons; but especially *Frosts* and *Blasts* in the Spring. This will readily be granted to be, not the *Fault* but the *Misfortune* of the Gardener; and such a *Misfortune* too, as they who live on the Continent are not so subject to, and therefore in a great measure peculiar to us who live in an Island.

However, to remove all Cause of Complaint, and to keep us from repining, Providence has been very liberal to us in some peculiar *Blessings* other ways. We are not subject to the Excesses either of Cold or Heat; and Nature assisted by Art produces for us the choicest Fruits: We abound in that which is properly the *Staff* of Life; and, which crowns all other Blessings, we live under such an happy Government, that what we *have* we *enjoy*.

These Circumstances so desirable to us, and so much the Envy of our Neighbours, are by no means to be

forgot

forgot by us, when we remember the Infelicity of ſome unkind Seaſons. And yet becauſe theſe Froſts and ſudden Blaſts are ſo much the real Grief of the ingenious Gardener, when he ſometimes ſees all the Fruit of his Labour, and his Expectations brought to nothing even in one Night, it may be well worth the while to enquire, whether a better Remedy than what hath hitherto been thought on or practiſed, may not be found out to cure this great Evil and dangerous Enemy.

The general Method hitherto uſed by careful Gardeners to preſerve Bloſſoms and tender Fruit from the Blaſt in the Spring, is to hang up Baſs-mats or other warm Coverings, which are rolled up in the Day-time, and let down in the Evenings, when moſt danger is ſuſpected. This Practice hath ſometimes ſucceeded very well, and preſerved ſome of the choiceſt Fruit: But there are theſe four Inconve-

conveniencies attend it. First, it is very chargeable to provide so many large distinct Mats, as every full grown Tree requires. Secondly, it mightily increaseth the Gardener's Care and Trouble to manage and adjust so many Mats every Morning and Evening; even in the most busy time of all the Year. Thirdly, Frosts do oftentimes come so unexpectedly, and even so late in the Year as the middle of *May*, that if the Mats happen not to be let down or continued, all former Care is lost, and most of the Fruit destroyed even in one Night. And yet, Fourthly, when the Mats *are* ordered and disposed as they should be, if high and black Winds arise, I have often found, that the Mats have done more harm than good, by their continual beating off the Blossoms and tender Shoots.

These Inconveniencies have put me often upon considering, whether a better and more effectual Remedy might

might not be found to prevent the Miſchief of theſe deſtroying Froſts; for which Purpoſe, if the following Diſcoveries and Directions prove of any real Service to the general and publick Good, I freely own the firſt Hints were made and given me by a very ingenious Gentleman and worthy Friend, himſelf a great Lover and Improver of vegetable Nature.

Now theſe Hints proceeded, I think, upon a right Suppoſition, that moſt of our Froſts and Blaſts both in Spring and Autumn, *fall perpendicularly*; that is to ſay, the condenſed Vapours *falling* from the upper Region do form themſelves at Night toward the Surface of the Earth in Dews or wat'ry Drops, ſubject to be frozen by the Coldneſs of the Air; and therefore the more any thing lies open and expoſed to this perpendicular *Deſcent* of Vapours, the more will it be ſubject to be *frozen*, or (which is the ſame thing) *blaſted*. The Truth of which

is confirmed to us both by Reason and Experience. As when a Fruit-Tree hath been set against a Slope-Wall, for the Convenience of receiving more of the Sun's Rays, we always find that *that* is the first and most blasted both in Spring and Autumn.

This therefore being the true State of the Case with respect to most of our destructive Blasts, a little Philosophy will teach us, that *horizontal Shelters* are the best Guard and Defence against *perpendicular Frosts*. And this is that which my worthy Friend made Experiment of in artificial ones made of Tiles or thin bits of Board fastened in the Wall, which he found (as I have myself also found since) to answer to a Wonder, and to secure the Fruit where-ever they were placed.

However these artificial Shelters thus *occasionally* placed, were rather used by way of Trial and Experiment, than

than with any View to have them generally made use of in that manner. I have therefore since considered with myself, how these *horizontal Shelters* may be so contrived, as to make either little Trouble or Charge, and to be of general use; especially to such as have a Fruit-Garden, such as I have above described, *yet* to make; or are willing to make new Walls for the greater Security of having Fruit.

Now the most plain and easy Method of doing this, so as to answer our Purpose all at once, is to lay Rows of Tiles in the Structure of the Wall at certain Distances one above another, the Tiles jetting forward and hanging over the Plane of the Wall about an Inch and half. This is neither a difficult nor a chargeable Practice, if the Wall be of Brick, to place, betwixt every two or three Rows of Bricks, these horizontal Shelters of Tile; and if the Wall be of Stone, if the Joints be any thing regular,

regular, it is not less easy. But now to avoid the Inconvenience and Unseemliness of Branches riding over the Edges of Tiles, it must be remembred, that at some convenient Distances in each Row of Tiles, there be left *void Places* or *Gaps* for the Wood-branches to pass; which Gaps should also be left wider at the bottom than the top of the Wall. It is very material also to observe, that the Rows of Tiles should not be laid exactly horizontal, but rather a little *dipping*, the better to shoot off all Wet.

But to make so considerable an Improvement in Gardening plain and intelligible, I have thought fit to annex a Figure of a Fruit-Tree growing against a Brick-Wall with horizontal Shelters *; that at one View may be seen, not only how naturally the Wood-branches may be carried thro' the several Gaps, and all the void

* See Fig. 3.

Places

Fig. 3.

Places of the Wall filled; but alſo how a Tree managed according to Art, ought to grow and ſpread with horizontal Branches, and form itſelf in every part regularly.

How theſe *horizontal Shelters* of Tile may be fix'd to Walls already built, I am not ſo well able to ſay; tho' I believe it *may* be done, eſpecially on Stone Walls where the Joints are generally wide enough to admit the Thickneſs of a Tile: But becauſe the Benefits attending this Method of Improvement, are ſtill more and greater than any I have yet taken notice of, it will be neceſſary to be a little more particular, to encourage the building theſe Walls. For,

(1.) By the Help of theſe Shelters, even in the moſt difficult Year, a good Quantity of the choiceſt Fruit may *almoſt* be depended upon, from ſuch Branches and Bloſſoms as are well ſheltered by the Tiles, as Experience hath ſufficiently ſhewn.

(2.) And,

(2.) And, which is very conſiderable, Fruits thus ſheltered from perpendicular Colds and Blaſts, I have experienced to be much *larger*, *better fed* and *finer taſted*, than thoſe on the ſame Tree that are more expoſed. And as a Conſequence of this,

(3.) They are alſo *forwarder* and much *earlier ripe* than others; which is no inconſiderable Advantage; eſpecially with reſpect to all late ripe Fruit, ſuch as Peaches, Figs and Grapes, which in many cold Summers, without ſuch or the like Helps, would never be ripe at all. For tho' one might be tempted to think rather the contrary, on the Account that ſome of the Meridian Rays of the Sun can hardly be ſuppoſed to reach the Fruit moſt ſheltered; yet conſidering that the very Branch on which the Fruit grows hath the utmoſt Degree of Heat; that the Fruit itſelf, tho' not ſo much directly ſhone upon, is yet fed with the freeſt Circulation

culation of Sap, and kept in a more even Degree of Warmth; and laſtly, that the Fruit thus ſheltered receives no ſmall additional Help by the Reflection of the Sun's Rays from the Row of Tiles below it: On all theſe Accounts it ſhould not ſeem ſtrange, that *horizontal Shelters* do really accelerate the ripening of Fruit, eſpecially when it is ſo well confirmed by Experience.

(*Fourthly* and *Laſtly*;) Walls built with theſe Rows of Tiles, will effectually cure that common Miſtake in Gardeners, of leading Wood-branches perpendicularly; for if the Gaps be left, as they ought, not one directly over another in the ſeveral Rows, the Branches will unavoidably be diſpoſed, as they ought, ſomething horizontally, and the middle of the Tree kept free from great Wood. Indeed the Gardener muſt have a very unhappy Genius, if he can in theſe Caſes prune a Fruit-Tree amiſs. For if he do not

leave the new Shoots too long, the *Necessity* of leading the Branches backward and forward (as may be seen in the Figure) will of Consequence produce bearing Wood.

N. B. It is of great Consequence to be pretty exact in keeping the *Projection* of the Tiles to about an Inch and half. For if *more* were allowed, and the Tiles stood farther out, too much of the Sun's Rays and Heat would be kept off from the Fruit and Branches; and if *less*, it would not be a sufficient Shelter. Either Extreme would be worse: And I believe it will be found that the middle Proportion here mentioned will best answer the Purpose of this Improvement.

N. B. In the Case of *black Wind-Frosts*, which come more horizontally, altho' these *Shelters* will be of singular Advantage; yet it may not be improper in *Extremities* to hang up Mats against some of the tenderest Nectarines and Peaches. The danger of

of having the Bloſſoms and tender Shoots beaten off by the Wind, will be effectually prevented by the *Projection* of the Tiles.

Note, Laſtly. The aforegoing Account of the *falling* of Vapours and forming themſelves in Miſts or Dews ſubject to be frozen, will ſerve to explain that very odd Phænomenon I have often taken notice of: *viz.* the Leaves and tender Shoots of a tall Aſh-Tree in one of theſe blaſting Miſts may be obſerved to be frozen, and, as it were, ſing'd in all the *bottom* and *middle* Parts, whilſt the *upper* Part of the Tree, that is exalted above the Influence of the Miſt, ſhall be left free and untouch'd.

I need not apply the Philoſophy of this to the Purpoſe of our *horizontal Shelters*: And a good Man need not be told, that tho' he is allow'd to guard himſelf by all prudential Methods againſt Misfortunes; yet his *ſafeſt* and *wiſeſt* way is always to look

upward; to pray for and expect the supernatural Aids of divine Grace to sweeten and allay the Miseries of Life.

Thus I have gone thro' the Substance of what I at first purposed in this Treatise; *viz.* to point out the chief and most general Causes of Barrenness in a Fruit-Garden, and to provide proper Remedies against them. And how far that Design hath been answered in the aforegoing Pages, I must leave to the candid Reader to judge: Only taking notice here, that what remains to be said in the concluding Part of this Treatise, shall be only some farther Observations and Improvements, relating to the Art of Gardening, loosely set down, without any great Regard to Order or Connexion.

Concerning the Great USE *and Admirable* QUALITIES *of Untry'd* EARTH.

WIthout intending in the leaſt to derogate from what the ingenious Mr. *Evelyn* and others have ſaid, concerning the ſeveral ſorts of Earths and their Improvements, I think my ſelf obliged to repeat and explain more largely, what I juſt hinted at in my firſt Part of Gardening; *viz.* the ſurprizing Succeſs which I had from the uſe of *untry'd Earth*, both with reſpect to what has been ſowed and planted in it.

By *untry'd Earth* I mean ſuch warm, mellow, rich Soil, as lies next the Surface (after the Turf is pared off) about ſix or ſeven Inches deep, in ſuch Places where neither Plough nor Spade hath ever come. Neither is this ſo difficult to be had as ſome may

think, moſt Lordſhips (as far as my Obſervation has gone) affording it in one Place or other in ſufficient Quantities; either in the lower Grounds and Meadows ſometimes overflow'd, and ſo inrich'd with drift Sand; or in the ſeveral Waſts, Commons, or other By-places frequented by Cattel; and this Earth will in great meaſure diſcover itſelf to skilful Judges, in the ſeveral *Gramens*, by the Turf which grows upon it.

Taking it therefore for granted, that this rich *untry'd Earth* may be had without any great Charge or Difficulty, from the Experience I have had of its ſurprizing Productions, I cannot but again and again recommend the Uſe of it for *Amendments* and *Improvements* both in the Fruit and Kitchen Garden. This I am aware will be thought ſtrange by all thoſe who have a Fondneſs for Dung, and think no Riches can be had without it. But I am well ſatisfied no ſort

of

of *Compoſition* made with Art, can be brought to exceed in all Reſpects *this* which Nature offers ſo freely to our Hands. For if you plant the choiceſt Fruit-Trees in this Earth, they preſently diſcover an uncommon Healthfulneſs and Vigour: If you ſow any of the tender ſorts of annual Plants, if the Earth be diſcreetly choſen and made fine by a Sieve, you may preſently perceive they *like* the Soil by their flouriſhing Looks and Colour. Even Mellons and Cucumbers, which are uſually nurſed with the greateſt Art, and complemented with the richeſt artificial Mould, do proſper *here* to a wonder; and if they have but equal Care in other reſpects, need no other Compoſt than this *untry'd Earth.*

Nay farther, in a Caſe where Dung has alway been thought to be wanted in greateſt Abundance, (and it is accordingly *loaded* in at a great Expence) I mean, in the making an Aſparagus

Bed, here all or most of that Expence is saved, and the Purpose as well, if not better, answered by the sole Use of *untry'd Earth* laid a Foot and half deep.

But lest it should be thought that I intend this *Nostrum* as a sort of *Catholicon*, or Quack-Pill, to serve all Purposes alike, I think my self obliged to say, that I know of no extraordinary Excellence in this Earth with respect to Flowers; especially the nicer and more tender sorts, but rather the contrary: So also for the several sorts of Exoticks and choice Shrubs, a proper artificial Composition may be much better and more suitable to *them* than this rich Earth: But then in all such Cases and Instances, as serve to make a Garden fruitful and profitable (which is to my present Purpose) as far as my Experience reaches, this *untry'd Earth* is much preferable to rotten Dung or the common artificial Composts, for these following Reasons.

First;

First; Dung, where it is laid in any Quantity, mightily fills the Place with many noxious Weeds, which, without great Care and Pains, will be apt to choak whatever is sowed or planted in it. But a covering of this new Earth, being immediately fit for use, is not so subject to that Inconvenience.

Secondly, Altho' plentiful dunging the Soil must be owned to be a great Amendment, and tends to make it rich and fruitful; yet Experience shews that all Legumes and annual Plants for eating, have by no means so *sweet* a Taste, as those raised in pure *wholesome* Mould; such as every one knows new broken up Ground produceth. Nitre and Sulphur are indeed the Life of Vegetation; but Dung, tho' full of them, contains also many other noxious heterogeneous indigested Juices, which generally give a strong and unsavoury Taste to every thing sowed and planted in it.

Whereas

Whereas Earth taken from under an old Turf, having a sufficient Quantity of Nitre or Sulphur or both, sufficient for the Purpose of Vegetation, hath all its Parts well mixed and incorporated, all its Juices are mellowed and refined by Age, and want only to be exposed to the Air to exert themselves. For which Purpose Monsieur *Quintiney* rightly observes, that the Sense of smelling is a proper Judge of the Goodness of Earth; because an *ill Smell* will be sure to give an *ill Taste.*

This Matter is made plain to a Demonstration in the Quality of Asparagus planted in and about *London*; where having Plenty of Dung, they form their Beds altogether of it at a great Depth; the Effect whereof is, that they have indeed exceeding large Asparagus; but of a Colour so *unnatural*, and a Taste so *strong* and *unsavoury*, that none who have tasted our finer and more natural sort in the

the Countrey, will covet the former. And yet if it were any Recommendation of it to have it so very large, *untry'd Earth* may boast of Productions equal to those at *London:* But indeed to me it seems a Fault, to have Asparagus too large as well as too little, for this reason; because being subject to a sort of Pith and Hollowness in the middle, when it is very large, the Water it is boiled in is apt to lodge there, and gives a wat'ry insipid Taste to it. But still I may add,

Thirdly, That tho' most of the artificial Composts come nearest to the excellent Qualities of this *untry'd Earth,* especially when they have had sufficient time to mellow and incorporate; yet this is cheaper; always ready at hand, and immediately fit for use: By which means the greater Quantity of Dung will be spared and allotted for the Pasture and Corn Land.

N. B. A

N. B. A Coat of this *untry'd Earth* laid only two Inches deep, is sufficient for most sorts of annual Plants from Seed, such as Beans, Peas, Lettuce, Spinage, Onions, Kidney Beans, *&c.* (except Carrots, Parsnips, *&c.* which require more) and will last well three or four Years without any other Amendment: And longer still, if only a little Coat of Dung be allowed as a Foundation for this Earth.

N. B. The Parings of Turf taken off where this Earth is found, if not otherways required, should be laid on Heaps to rot two or three Years; and this will produce incomparable Soil for Amendments; the oftner it is stirred, the better.

If it shall here be wondered at, that I say no more of the Management and Improvement of the Kitchen Garden, I have only this to say, That Subject seems to have been already exhausted, by the many several Authors that have treated of it.

Besides,

Beſides, there ſeems to be nothing difficult in it; Every Man that can but handle a Spade, being able and ready to give Inſtructions for what is proper to be done in all the ſeveral Parts of the Year. Only there is one thing relating to the Management of Hot-Beds, whereon Mellons and Cucumbers, *&c.* are wont to be raiſed, which it may not be amiſs here to take notice of; becauſe, tho' it hath been practiſed with Succeſs by ſome of the Gardeners near *London*; yet other Perſons curious in that Matter, not being apprized of it, may think themſelves obliged for the Relation.

Inſtead of making the Glaſs Frames, as is uſual, open at the bottom, they may be made with ſtrong Wires croſſing one another, ſo as to be able to ſupport a Bed of Earth four Inches deep for the ſeveral Plants to grow in: And thus the whole may be lifted by four Men from one Hot-Bed to another,

another, as occaſion ſerves. This Method has theſe two very conſiderable Advantages attending it. Firſt, this ſaves the Trouble and prevents the Danger of *tranſplanting*, which oftentimes proves fatal; but always proves a great Check to the Growth of theſe tender Plants: Secondly, here is no Intermiſſion in the Growth of the Plants, nor any artificial Heat of the Hot-Bed loſt or waſted, which in the ordinary Methods cannot be avoided; for there you muſt wait 6 or 7 Days, till the great Heat be abated, leſt the tender Roots of the Plants be ſcorched: Whereas in the Caſe before us, you may allot juſt what Degree of Heat you pleaſe; for when the Heat is too violent, the Frame may be placed ſomething hollow from the Bed; when it abates, it may wholly reſt upon it; and when the Bed grows too cold, the Frame may be carried to another.

But

But I leave this Matter with the Curious to apply it as they ſee occaſion, and to make farther Improvements; intending here only to give ſome ſhort Hints of what I ſuppoſe may be made uſeful to the Publick, and acceptable to all contemplative and ingenious Gentlemen. Hoping therefore that what follows may alſo prove ſo, I will add ſome Particularities relating to the raiſing and managing Fruit-Trees not yet touch'd on.

Experience having made it plain, of how great Conſequence it is to have all the tenderer ſorts of Fruit put upon right and proper Stocks by Inoculation, eſpecially where the Soil is cold and wet: And it being alſo found to be a Matter of ſome Difficulty to make the Stones of the larger ſorts of Plums to grow, ſeeing they commonly fail by being kept either too wet or too dry, I have thought upon and practiſed an Expedient, that doth, I think, effectually anſwer the

preſent

present Purpose, *viz.* to inoculate the common ordinary Plum-Stocks or Suckers with the Pear, Muscle or Bonum magnum Plums, and then upon the Shoots of these to put the Peach, Nectarine, or Apricot, as you desire: And the Operation may be performed upon the first Years Production from the Plum-Stock; so that little Time need be lost.

The Propriety and Reasonableness of this Procedure is founded upon common Experience and Observation; that the Miscarriage of these sorts of Fruit put upon wrong Stocks is always at the Place of Inoculation; where they either put out Gum and die, by being not exactly incorporated; or else so very much swell and overgrow the Stock, that the Head is not duly nourish'd; for want, I suppose, of proper Ducts and sufficient Juices below. I mention Plum-Suckers, not that I perfer *them*; but only that I think by frequent Removes in the Nursery,

sery, they may be made to do well enough.

Altho' it be certainly known, that Grafting and Inoculation are the general Methods of *propagating* the several Kinds of Fruit already in being; yet *neither* of those Operations tend to the Production of any new Species; the Scion or Bud *always* following the Nature and Kind of the Tree from whence it was taken. From whence it follows, that all those several Species and different sorts of the same Fruit which our Gardens furnish us withal, were originally, (and in a *good Sense* accidentally) raised from the Seed, Stone, or Kernel of every *common Genus*, whether Pear, Apple, Plum, or Cherry, *&c.*

I have not my self had Leisure nor many Opportunities of making Experiments of this Nature; but thus much is certain, that in the Productions of Fruit from the Seed or Kernel, Nature *commonly* and *for the most*

part degenerates, and you have *ordinarily* from such Seed or Kernels a much worse sort than that which was sowed. But then there is this *comfortable* Circumstance to be added, that *now and then* you have a sort proves altogether as *good* as the kind sowed; and *sometimes*, tho' not often, *much better* and *more excellent*; which has encouraged the Nursery Men to try Experiments, and has afforded those several *excellent* sorts we daily hear of, to invite the Curious to taste the Fruit.

However, not satisfied with this general Knowledge, my Curiosity has led me to enquire of others, of more Leisure and longer Experience, particularly as to Pears and Apples, whether they had observed the Degeneracy to be greater and more universal in the Seed sowed from grafted Fruit, or that which was taken from good fruit *naturally* raised. The Answer I had from one Friend was;

That

That he could never obſerve the *latter* would much degenerate; for tho' 'twas often *different*, ſometimes much *the ſame*, and ſometimes, tho' rarely, *better*; yet that it hardly ever proved a Crab or Wilding: Whereas in the *former* Caſe, even from Fruit of the beſt ſorts grafted, the Production was commonly worſe, and for the moſt part did partake of the Nature of the Stock, and proved a Wilding or Crab.

On the other ſide I have now by me a Letter from a worthy Clergyman in *Worceſterſhire*, which tho' it gives a ſeemingly different Account from the former; yet becauſe there are ſome curious Experiments in it, I ſhall here inſert it for the ſake of the Publick.

Reverend Sir,

I Have now before me a Letter from a Friend, in which he tells me you have heard of my having Experience in raiſing Fruit-Trees by Kernels, and

that the same Seed hath produced Plants of different Kinds; you desire to know whether that Experiment hath been made with the Kernels of Fruit that was grafted, as well as of that *raised by Seed, and what difference I have observed between them. I have rais'd great Numbers of Fruit-Trees from Kernels, both from the grafted Fruit, and from those raised from Seed. And from the Kernels only of three or four sorts of Apples, I have, I believe, an hundred different sorts; some resembling the Fruit sowed; some abundantly better both in Colour and Taste, and some of them perfect Crabs; but all of them distinguishable from each other; and, according to my Observation, the greater Number of the different Species come from the Kernels of the grafted Fruit. If this will be of any Service to you, I am sure it will be a great Satisfaction to,*

Sir, Your very affectionate Brother, and most humble Servant,

Edw. Whitcombe.

If these two different Accounts may be reconciled on a Supposition, that Mr. *Whitecombe's* Observations were made from the Kernels of Fruit grafted, not on *Crab-Stocks*, but on some of the *natural Apples* raised from Seed: Then the proper Use to be made from the whole, will be; That for all Persons curious in the Art of Nursery, the way that is most likely to succeed in getting new sorts, is to use the Stones or Kernels of the *natural* sorts that are good, or rather the Kernels of the good *natural* sorts, improved by grafting or Inoculation. But this also I leave with the ingenious Inquirers into vegetable Nature, for their farther Observations and Improvements, and proceed to

Note, Another thing worth remarking; *viz.* a very convenient Practice relating to the fastening the Branches of Fruit-Trees on old Walls. This I have observed to be done with great Expedition, by using only small Wil-

lows in the Winter, and Ruſhes in the Summer turned over the Branch, and then twiſted about a Nail already faſtened in the Wall. Now the great Benefit and Uſefulneſs of this Method will quickly appear to all ſuch, as have no better than old Walls, compoſed of indifferent Stone with large Joints, for Fruit-Trees to grow againſt: For theſe ſorts of mould'ring Walls are found to be much decayed and weakened, by the continual *drawing* the Nails every Seaſon, but by this Method are obſerved to laſt many Years.

I cannot well omit deſcribing here a very uſeful Inſtrument, contrived by a very ingenious Gentleman and Neighbour, for the more ſafe and ready tranſplanting Trees out of the Nurſery, or from one part of the Garden to another, as occaſion requires. It is made exactly in the Shape of a little Tub, cut perpendicularly down the middle into two ſemicir-

ſemicircular Halves, ſomething leſs at the bottom than the top: Which Semicircles being held together by Iron Hoops diſtinctly, are ſo contrived, as when they are uſed, to be held together only by Iron Hooks on one ſide, and drawn together by a long Iron Screw on the other. For after the circular Trench is made round the Tree, it will eaſily be perceived, that ſuch an Inſtrument muſt be of great Uſe, to hold a ſufficient Quantity of Earth about the Roots, and make its Removal ſafe, or very little injurious. I conſider my Title Page, ſo need not uſe many Words: *Sapienti Verbum.* Once more.

Becauſe the Grape is ſo noble a Fruit, when full ripe, ſome Years ſo difficult to be obtained, and therefore deſerves our greateſt Art to encourage it, I would recommend planting the Vine on ſuch a *South* Expoſition of the Houſe or Out-houſes, as (if poſſible) may have the Advantage of a

Slope falling to the *South*: Which Slope (especially if it were paved with Brick, Stone or Quarrs, which is very adviseable) collecting and receiving more of the Sun's Rays, will consequently afford greater and stronger Reflections of the same from the several Angles of Incidence; and thereby much accelerate the ripening of the Fruit. I cannot easily be brought to think any Soil or Situation can be too dry for the Roots of a Vine, after having seen at *Barnwel* near *Oundle* in *Northamptonshire* a flourishing Vine grow from between the Joints of an old Castle Wall near 20 Feet high from the Ground, its Branches hanging downwards: And (as I was told) when it was carefully pruned and managed, it produced admirable Grapes.

N. B. Because the chief Beauty of Trees planted in Rows for Avenues consists in their being streight, regular and upright; and because there

are

are many other Cases wherein it is very undesirable to have a Tree grow crooked and irregular, it may not be amiss to inform the Curious, that cutting such a Tree in the Ham or Bend of the Crook with a Knife perpendicularly, 6 Inches above and 6 below in two or three Places, will strangely facilitate its Reduction, and in three or four Years perfect its Cure, provided the Tree be but pruned up, and freed of all its Branches below and a little above the Bend, and care be taken every Year to renew the Slits.

N. B. Although it be contrary to common Practice and the Rules of Gardening to set Apple Trees against a Wall; yet it may not be improper on some *West* Wall, where there is room to spread, to afford a Place for a golden Pippin, for the sake of that surprizing large Fruit it will afford, so much beyond the ordinary Size; which may not perhaps be thought *better:* But if it be *bigger* and not *worse*, it

cannot

cannot sure be unacceptable to behold and taste such a *Bonum Magnum*.

Two glorious Qualities in whatsoever subject they meet, and are always in some Degree or other a Resemblance of the Divine Fountain of Goodness; even of him who is the One supreme, self-existent, independent, unoriginated ὁ μόνος ἀγαθὸς, ὁ παντοκράτωρ, ὁ Θεὸς: * To whom be Honour, Glory, Dominion and Power by Christ Jesus throughout all Ages, World without End! *Amen.*

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* Rom. 16. 27. Eph. 3. 21. 1 Pet. 5. 10, 11.

APPENDIX.

The following Letter was ſent me from a Brother of mine in London. *The Method he there gives for finding a Meridian Line appears to be the moſt accurate of any that I know of.*

Dear Brother,

UNderſtanding you intend to direct a Method for finding a Meridian Line in your Book of Gardening, it may be you may think it of Uſe to the Publick to have (beſide yours) a ſhort Deſcription of a new and familiar way of doing it very exactly by the Pole-Star; Thus,

Firſt, Adjuſt your Clock or Watch, as near as may be, by a Quadrant, or otherways. Then fix a ſtrong Pole of about 14 Foot long as near as you can perpendicularly, and at 12 a Clock make a Mark at about 5 Foot diſtance

distance in the Shadow, where you are to fix another Pole of the same Height as before, which two Poles will be nearly in a Meridian. Then at the top of each of these Poles nail Pieces of Wood or Iron about 2 Foot long, yet so as to be moved upon occasion. At the ends of these fasten Lines of fine Cat-gut with leaden Weights at the end of them with a Liberty of slipping backward and forward, till the Eye, the two Strings, and the Pole-Star are in a right Line, at such time as the Pole-Star comes to the Meridian. To find which observe the following Directions.

Substract the right Ascension of the Sun (which is found by the following Table for every Day in the Year) from the right Ascension of the Pole-Star (which is now 37 Minutes in time, and increaseth 1 Minute and 16 Seconds in 10 Years) the Remainder will correspond to the time of the Pole-Star's coming to the Meridian above

above the Pole, and near 12 Hours before or after will be the time of its coming to the Meridian under the Pole. Thus becauſe 11°. 0′. in Aries correſponds to 37 Minutes in time of right Aſcenſion; when the Sun is there (which is *March* 20.) the Pole-Star comes to the upper Meridian at Noon. And becauſe 191°. 0′. of the Ecliptick (where the Sun is *Sept.* 22.) hath $12^h.\ 37^m.$ in time of Aſcenſion, the Pole-Star comes to the ſame Meridian at Midnight: And in both Caſes its Hours from that Meridian agree with the ordinary reckoning of Hours with us. At other times it comes ſooner than the Sun, *viz.* about 4 Minutes every Day or an Hour in 15 Days. Thus *April* the 22*d* laſt Year, the Day of the great Eclipſe, the Sun's right Aſcenſion was $2^h.\ 41^m.$ in time; which deducted from 37 Minutes, or $12^h.\ 37^m.$ the Remainder is $9^h.\ 56^m.$ which ſhews that the Pole-Star came to the upper Part of the Meridian at

9 a Clock and 56 Minutes before Noon; and at 9 at Night and about 54 Minutes paſt to the lower Part of the Meridian, which is nearly 4 Minutes for a Day or an Hour for 15 Days along the Ecliptick, and ſo in all other Caſes whatſoever.

N. B. When the Sun's right Aſcenſion exceeds 12 Hours 37 Minutes, you are to remember to add 24 Hours to the right Aſcenſion of the Pole-Star; the former being ſubſtracted from the latter gives the time in the Afternoon of the Pole-Star's coming to the upper Meridian. Thus *Jan.* 5. the Sun's right Aſcenſion is $19^{h}.\ 52^{m}.$ which ſubſtracted from $24^{h}.\ 37^{m}.$ leaves $4^{h}.\ 45^{m}.$ and thereby ſhews that the Pole-Star came to the upper Meridian at $\frac{3}{4}$ paſt 4 in the Afternoon.

Your two Strings being placed in the true Meridian, you may with great Exactneſs know when the Sun is in the Meridian, *viz.* by the Help of a ſmok'd Glaſs (to prevent the Sun's glaring in your

your Eyes) bring your Eye close to the *Northern* String, and when your Eye, the two Strings, and the Centre of the Sun are all in a right Line, you may be assured 'tis exactly 12 a Clock. And because the Sun's Azimuth is swiftest at that time, you may in a few Seconds observe its Motion from the Strings.

N. B. If you set two Vessels of Water, so that each Weight at the two Strings be just covered, they will hang much the steddier; and if your Observation is made when 'tis very dark, it will be Convenient to have a Candle held at the *Northern* String.

An exact Meridian thus obtained being not supposed to continue in that manner, it may not be amiss to direct the transferring it within-side the House, in order to answer readily and exactly all future Purposes, and assist the Curious to adjust Clocks, Sun-dials and Watches; to find the true bearing of all near or distant Places; and

(which

(which is very considerable) to find the exact Latitude of the Place, as will be easily observed by any one that hath but the least Skill in Trigonometry.

In order then to transfer your Meridian within-side the House, make or drill a hole in one of the upper Panes of Glass in a high Window, painting the Glass back in a Circle 3 or 4 Inches round the hole. This done, cause a Signal to be given when the Sun is exactly in your Meridian, and at that Instant make a Mark where the Centre of Light falls on the horizontal Floor. Then by the Help of a Plum-Line, bring your Eye, the Mark made on the Floor, and the Hole in the Glass all in a right Line, and the String will direct you to another Point in the same Line; from which two Points draw a strait Line made visible, and this will be a most exact Meridian. I am,

Dear Brother, yours affectionately,

London, Jan. 5. 1716. EDWARD LAURENCE.

A Table

A Table of the Sun's right Ascension in Time for every Day in the Year.

D.	Jan.		Feb.		March		April		May		June	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	19	35	21	43	23	29	1	21	3	15	5	20
2	19	39	21	47	23	32	1	24	3	19	5	24
3	19	43	21	51	23	36	1	28	3	22	5	28
4	19	48	21	55	23	40	1	32	3	26	5	32
5	19	52	21	59	23	43	1	36	3	30	5	36
6	19	56	22	3	23	47	1	39	3	34	5	41
7	20	0	22	6	23	51	1	43	3	38	5	45
8	20	4	22	10	23	54	1	47	3	42	5	49
9	20	8	22	14	23	58	1	51	3	46	5	53
10	20	13	22	18	00	1	1	55	3	50	5	57
11	20	17	22	21	00	4	1	58	3	54	6	2
12	20	21	22	25	00	8	2	1	3	58	6	6
13	20	26	22	29	00	12	2	5	4	2	6	10
14	20	30	22	33	00	16	2	9	4	6	6	14
15	20	34	22	37	00	20	2	13	4	10	6	18
16	20	38	22	40	00	23	2	16	4	14	6	22
17	20	43	22	44	00	26	2	20	4	18	6	27
18	20	47	22	48	00	30	2	24	4	22	6	31
19	20	51	22	52	00	34	2	28	4	27	6	35
20	20	55	22	55	00	37	2	33	4	31	6	39
21	20	59	22	59	00	41	2	37	4	35	6	43
22	21	3	23	3	00	44	2	41	4	39	6	47
23	21	7	23	7	00	48	2	44	4	43	6	51
24	21	11	23	10	00	52	2	47	4	47	6	55
25	21	15	23	14	00	55	2	51	4	51	6	59
26	21	19	23	18	00	59	2	55	4	55	7	4
27	21	23	23	21	1	2	2	58	4	59	7	8
28	21	27	23	24	1	6	3	2	5	3	7	12
29	21	31	23	27	1	10	3	6	5	8	7	16
30	21	35	—	—	1	14	3	11	5	12	7	20
31	21	39	—	—	1	17	—	—	5	16	—	—

The Table continued.

D.	July		August		Sept.		Ottob.		Nov		Dec.	
	h.	m.	h.	m.	h.	m.	h.	m	h.	m.	h.	m.
1	7	24	9	26	11	20	13	9	15	9	17	17
2	7	28	9	30	11	24	13	12	15	13	17	21
3	7	32	9	34	11	28	13	16	15	17	17	25
4	7	36	9	37	11	32	13	20	15	21	17	30
5	7	40	9	41	11	35	13	24	15	25	17	34
6	7	44	9	45	11	39	13	27	15	29	17	39
7	7	48	9	49	11	42	13	31	15	33	17	43
8	7	52	9	53	11	46	13	35	15	37	17	48
9	7	56	9	56	11	50	13	39	15	42	17	52
10	8	1	10	0	11	53	13	42	15	46	17	57
11	8	5	10	4	11	57	13	46	15	50	18	1
12	8	9	10	7	12	1	13	50	15	54	18	5
13	8	13	10	11	12	4	13	54	15	59	18	10
14	8	17	10	15	12	8	13	58	16	3	18	14
15	8	21	10	18	12	12	14	1	16	7	18	19
16	8	25	10	22	12	15	14	5	16	11	18	23
17	8	29	10	26	12	19	14	9	16	16	18	27
18	8	33	10	29	12	22	14	13	16	20	18	32
19	8	36	10	33	12	26	14	17	16	24	18	36
20	8	40	10	37	12	30	14	21	16	29	18	41
21	8	44	10	40	12	33	14	25	16	33	18	45
22	8	48	10	44	12	37	14	29	16	37	18	50
23	8	52	10	47	12	40	14	33	16	42	18	54
24	8	55	10	51	12	43	14	37	16	46	18	58
25	8	59	10	55	12	47	14	41	16	50	19	3
26	9	3	10	58	12	51	14	45	16	54	19	7
27	9	7	11	1	12	54	14	49	16	59	19	12
28	9	11	11	5	12	58	14	53	17	3	19	16
29	9	15	11	9	13	2	14	57	17	8	19	20
30	9	18	11	13	13	6	15	1	17	12	19	25
31	9	22	11	16	—	—	15	5	—	—	19	29

A Table

A Table shewing what Angle the Pole-Star makes from the Meridian at every Hour and half Hour before and after the Time of its coming to the Meridian both above and below the Pole.

Hours.		Distances from the *North* above the Pole.		Hours.		Distances from the *North* below the Pole.	
		°	′			°	′
12	12	0	00	6	6	3	41
½	½	0	30	½	½	3	38
11	1	1	00	5	7	3	31
½	½	1	29	½	½	3	21
10	2	1	56	4	8	3	07
½	½	2	21	½	½	2	50
9	3	2	42	3	9	2	31
½	½	3	00	½	½	2	09
8	4	3	17	2	10	1	46
½	½	3	28	½	½	1	21
7	5	3	37	1	11	0	55
½	½	3	45	½	½	0	27
				12	12	0	0

The Reader may obſerve by this Table, that if his Obſervation was made ⅛ part of an Hour before or after the time Pole-Star's coming to the Meridian, the Difference in finding a true Meridian by this Method will not be ſenſible.

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